

**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**

**2014**

Author	:	Amany Mohammed Abbas
Title	:	The effect of scapular stabilization exercises on chronic neck pain
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Dien Abd El Hakim Balbaa
	2.	Yasser Hassan EL Melegy
	3.	Magdolin Mishel Samy
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Pain in the neck or scapular region is one of the most frequent symptoms in cervical radiculopathy, which is commonly caused by degenerative process in the spine. <b>Purpose:</b> To determine the effect of scapular stabilization exercises in the treatment of chronic neck pain regarding pain and disability and limitation in the range of motion. <b>Patients and methods:</b> Thirty male and female patients with chronic neck pain were involved. Aged between 30-50 years old. They were randomly assigned into two groups. In group (A), patients received physical therapy program in the form of infrared, transcutaneous electrical nerve stimulation (TENS), Stretching and cervical stabilization exercises. In group (B), patients received scapular stabilization exercises in addition to the same physical therapy program .Treatment was given 3 times a week for 4 weeks. Range of motion of the cervical spine, range of motion of the scapula, neck pain and disability were assessed before and after treatment. <b>Results:</b> There was significant improvement in both groups (A and B) in cervical range of motion, pain and disability. Group (B) showed more significant improvement than group (A) in cervical range of motion and pain and disability .There were no significant improvement in both groups in scapular range of motion. <b>Conclusion:</b> Scapular stabilization exercises should be used as an integral part in the rehabilitation program for patients with chronic neck pain.</p>		
Key words	1.	Neck pain
	2.	Neck stabilization exercises
	3.	Scapular stabilization exercises
	4.	Exercises.
	5.	Neck pain.
Classification number	:	617.371.AAE
Arabic Title Page	:	تأثير تمارينات تثبيت لوح الكتف على حالات ألم الرقبة المزمنة.
Library register number	:	3677-3678.

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Author	:	Amna El-Hadi Khalifa
Title	:	Effect of Electroacupuncture on Pain and Functional Performance in Patients with Discogenic Sciatica
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Amir Mohamed Saleh.
	2.	Mahmoud Alm Eldin Hafez.
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Sciatica is a common clinical problem causing pain and functional disability resulting from bulge or herniation of one or more lumbar intervertebral discs. It is a frequent and often debilitating event. <b>Purpose:</b> The purpose of this study was to evaluate the effect of Electroacupuncture on pain and functional performance in patients with discogenic sciatica. <b>Subjects:</b> Thirty patients with discogenic sciatica (mean age <math>45.8 \pm 2.48</math> years, height <math>176.66 \pm 7.39</math> cm, weight <math>72.86 \pm 7.32</math> kg, and BMI <math>23.29 \pm 1.09</math> kg/m<sup>2</sup>) participated in this study. <b>Materials and Methods:</b> Patients were assigned into two equal groups; control group (A) was the group received traditional physiotherapy and study group (B) received the same traditional physiotherapy and electroacupuncture; each group being composed of 15 sciatic patients resulting from lumbar disc bulge. Data of visual analogue scale (VAS) and Oswestry disability index (ODI) were collected from each patient in both groups pre and post physiotherapy program. <b>Results:</b> There were a significant differences regarding VAS and ODI pre &amp; post treatment in both groups, as pain intensity measurement for group (A) showed (<math>7.53 \pm 1.45</math>) pre treatment and showed (<math>4.8 \pm 1.89</math>) post treatment. In group (B) showed (<math>7.73 \pm 1.53</math>) pre treatment and showed (<math>3.53 \pm 0.99</math>) post treatment. But regarding ODI group (A) showed (<math>51.86 \pm 17.5</math>) pre treatment and showed (<math>37.2 \pm 12.0</math>) post treatment. In group (B) showed (<math>51.0 \pm 11.88</math>) pre treatment and showed (<math>27.06 \pm 8.64</math>) post treatment. There were a significant difference between both groups post treatment for pain intensity measurement and for ODI. <b>Conclusion:</b> The physiotherapy program is not only effective with good result in patients with discogenic sciatica, but also better result with improvement in pain and functional disability if we add electroacupuncture to the treatment program.</p>		
Key words	1.	Sciatica
	2.	Electroacupuncture
	3.	Functional Performance
	4.	Oswestry disability index
Classification number	:	616.7892.KAE
Arabic Title Page	:	تأثير الوخز بالإبر الكهربائي على الألم والأداء الوظيفي في مرضى عرق النسا المصاحب للإنزلاق الغضروفي.
Library register number	:	3621-3622.

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

Author	:	Anas Majed Mahmoud Matar
Title	:	Low level laser versus proprioceptive training in treatment of knee osteoarthritis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd El-Azim Fayaz
	2.	Lilian Albert Zaky
	3.	Aly Mohamed El-Zawahry
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p>Objective this study was done to assess the therapeutic efficacy of low level LASER and proprioceptive training in improving functional performance and proprioception accuracy and reducing pain intensity with knee osteoarthritis cases, and to determine which one of these two treatments is more effective to improve these variables. Method: Thirty male and female patients with moderate knee osteoarthritis from both sexes were involved, aged between 40-60 years old. All patients were randomly assigned into two groups. The group (A) (n=15, mean age: 54.6±4.2 years) received low level laser, while the group (B) (n=15, mean age: 53.4±3.56 years) received proprioceptive training. All patients received exercise program (12 sessions, 3 sessions per week) over a four weeks period. Functional performance (using WOMAC index), proprioception accuracy (using Myrin “OB” goniometer to calculate AAE at 30°) and pain intensity (using visual analogue scale) were assessed, pre-treatment and post-treatment for both groups. Results: The results of the current study revealed that either low level LASER therapy or proprioceptive training combined with exercises for four weeks in patients with knee OA resulted in significant increase in functional performance and proprioception accuracy in the post-treatment, associated with a significant decrease in pain intensity in the post-treatment in both groups. In addition, it revealed that there was no significant difference between low level LASER therapy and proprioceptive training as regard to functional performance, proprioception accuracy and pain intensity. Conclusion: It was concluded that low level LASER therapy or proprioceptive training combined with exercises were effective in improving functional performance and proprioception accuracy and reducing pain intensity in patients with knee osteoarthritis. While there was no significant difference between both groups.</p>		
Key words	1.	knee osteoarthritis
	2.	low level LASER therapy
	3.	low power LASER therapy
	4.	proprioceptive training
	5.	neuromuscular training
	6.	Proprioception
	7.	WOMAC
	8.	joint position sense
Classification number	:	
Arabic Title Page	:	الليزر منخفض الشدة مقابل تدريب المستقبلات الحسية العميقة في علاج الالتهاب
Library register number	:	3873-3874.

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

Author	:	Asmaa Ali Mohamed Ibrahim
Title	:	Effect of hand grip strength on shoulder muscles activity in patients with subacromial impingement syndrome
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El SayedAyad
	2.	Mervat Abdel Hameed El Tokhy
	3.	MagdolineMishelSamyShenouda
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Subacromial impingement syndrome (SIS) is a common shoulder disorder. Patients often complain from a decrease in electromyographic (EMG) activity of the rotator cuff muscles especially the supraspinatus muscle during glenohumeral elevation. <b>Objective:</b> The purpose of the study is to assess the effect of applying 50% of maximum voluntary contraction of hand grip strength on the EMG activity of the shoulder muscles in patients with SIS. <b>Methods:</b> Thirty male and female patients participated in this study. Their ages ranged from 25 to 40 years. EMG activity of supraspinatus muscle and middle deltoid muscle was assessed without and with applying 50% of maximum voluntary contraction (MVC). <b>Results:</b> A significant difference was found for both supraspinatus and middle deltoid muscles, indicating that the gripping resulted in increasing muscle activity. <b>Conclusion:</b> Applying 50% MVC of hand grip strength could increase the supraspinatus and middle deltoid muscles activity in patients of SIS. This might be useful in the development and monitoring of shoulder rehabilitation strategies.</p>		
Key words	1.	subacromial impingement syndrome
	2.	electromyographic
	3.	Supraspinatus muscle
	4.	Deltoid muscle
Classification number	:	616.74.IAE
Arabic Title Page	:	تأثير قوة قبضة اليد على نشاط عضلات الكتف في مرضى متلازمة انحصار الكتف.
Library register number	:	3641-3642.

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Author	:	Atef Abd El Alim Abd El Halim
Title	:	Positional release technique versus post isometric relaxation technique in treatment of cervical spondylosis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El sayed Ayad
	2.	Aly Mohamed Elzawahry
	3.	Magdoline Mishel Samy
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Degenerative changes are often asymptomatic, but can lead to neck pain and stiffness. <b>Purpose:</b> To compare between the effect of positional release technique and post isometric relaxation technique in treatment of patients with cervical spondylosis. <b>Subjects:</b> Thirty patients participated in the study. They were randomly assigned into 2 groups. Group (A) consisted of 15 patients with a mean age 43.66(±4.02) years; who had received positional release technique for upper trapezius and sternocleidomastoid muscles with traditional physical therapy program which included (infrared and isometric exercises only). Group (B) consisted of 15 patients with mean age 42.33(±5.38) years who had received post isometric relaxation technique for the same muscles and the same traditional physical therapy program lasting for 9 sessions (3 sessions/week) over three weeks period. Patients were evaluated pretreatment and post treatment (after 3 sessions, after 6 sessions and after 9 sessions of treatment for pain severity, functional disability and cervical range of motion (ROM). <b>Results:</b> Patients of both groups showed significant improvement in pain and functional disability. Flexion ROM was improved significantly in group (A) and extension was improved significantly in group (B). Between groups there was no statistical significant difference in all measured variables. <b>Conclusions:</b> Both positional release technique, and post isometric relaxation technique are effective in reducing cervical pain and functional disability. Positional release technique are effective in increasing cervical ROM especially flexion motion and post isometric relaxation technique are effective interventions to increase cervical ROM especially extension motion. However, there was no statistical significant difference in cervical pain, functional disability and cervical flexion, extension, bilateral side bending and bilateral rotation between positional release technique group and post isometric relaxation group.</p>		
Key words	1.	Positional release technique.
	2.	Post isometric relaxation technique.
	3.	Cervical spondylosis.
Classification number	:	616.73.EAP
Arabic Title Page	:	تقنية الانفراج الوضعي مقابل استرخاء ما بعد انقباض متساوي الشدة في علاج التهاب فقرات العنق.
Library register number	:	3623-3624.

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Author	:	Bassem Mohamed khalifa Mohamed
Title	:	Under-water exercises Versus Land-Based Exercises in The Treatment of Knee Osteoarthritis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Wafaa Hussien Borhan
	2.	Alaa Abass Sabry Mostafa,
	3.	Haidy Nady Ashem
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Objective:</b> To compare the effectiveness of under-water exercises with land-based exercises on quadriceps muscle strength, pain intensity and function in patients with osteoarthritis of the knee joint. <b>Methods:</b> thirty men with OA of the knee were randomly assigned, classified into two groups that performed exercises for 6 weeks: under-water exercises group and a land-based exercise group. The outcome measures included visual analog scale (VAS) for assessment of pain intensity, Biodex system 3 Isokinetic dynamometer for assessment of quadriceps muscle strength and walking time measured by timed up and go (TUG) test. Measurements were recorded at baseline and at 6 weeks after initiating the intervention. <b>Results:</b> This study has shown that both the land based and underwater exercise programs successfully improved quadriceps muscle strength, pain and function. Comparisons between the two groups showed that there was no significant difference between the underwater group and the land based group for quadriceps muscle strength and physical performance. But there was a significance difference in the post treatment value in pain intensity using VAS and this prove that underwater exercises were superior to land based exercises in relieving pain. <b>Discussion and Conclusion:</b> Both the land-based and under-water interventions produced positive outcomes in quadriceps muscle strength, pain intensity and the function for patients with knee OA. Underwater exercises were superior to land based exercises in relieving pain.</p>		
Key words	1.	Under
	2.	water exercises
	3.	Land
	4.	based exercises
	5.	Functional activity.
	6.	Knee
	7.	quadriceps muscle strength
	8.	pain
	9.	Osteoarthritis.
Classification number	:	616.7223.MBU
Arabic Title Page	:	التمارين المائية مقابل التمارين الأرضية في علاج الالتهاب العظمى المفصلي للركبة.
<b>Library register number</b>	:	<b>3739-3740.</b>



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Author	:	Dina Lutfy Sharaf
Title	:	Efficacy of laser acupuncture in the treatment of sciatica
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd Elazim Fayaz
	2.	Ali Osman El Mofty
	3.	Lilian Albert Zaky
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>BACK GROUND:</b> Sciatica is a common clinical problem causing pain and functional disability. There are many studies that support the efficacy of laser and acupuncture in the treatment of sciatica but there are no studies on the effect of using laser needle on acupuncture points to treat sciatica . <b>OBJECTIVE :</b> The purpose of this study was to determine the effect of laser needle on acupuncture points in treatment of sciatica. <b>DESGIN :</b> Thirty patients (15 males and 15 females ) diagnosed by their referring physician with sciatica due to lumbar disc lesion participated in this study. They were randomly assigned to either experimental group receiving laser needling and McKenzie exercises and control group receiving sham laser and McKenzie exercises before and after 4 weeks of treatment performed every other day. Pain intensity, Oswestry Disability Questionnaire outcome and schober test results were recorded pre and post treatment. <b>RESULTS:</b> both groups achieved improvement in pain , functional disability and spinal mobility. However the experimental group achieved a significant improvement in pain, functional disability and spinal mobility more than the control group. <b>CONCLUSION:</b> The laser needle application on acupuncture points described in this study is efficient in treating sciatica and assosciated with improvement in spinal mobility and decrease in pain and disability. The combination of laser needle with McKenzie exercise program has a better effect on pain and functional disability and spinal mobility</p>		
Key words	1.	Sciatica
	2.	Laser
	3.	Acupuncture
	4.	McKenzie exercises
	5.	Sciatica.
Classification number	:	616.7892.SDE
Arabic Title Page	:	فاعلية الوخز بالليزر فى علاج التهاب عصب النسا.
<b>Library register number</b>	:	<b>3699-3700.</b>

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Author	:	Hamza Mahmoud Mohamed Shaheen
Title	:	Forearm support band versus wrist splint in treatment of lateral epicondylitis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd ElAzim Fayaz
	2.	Lilian Albert Zaky
	3.	Ayman Mahmoud Mansour
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p>Objective this study was done to assess the therapeutic efficacy of forearm support band and wrist splint in minimizing severity of pain and improving hand grip strength with lateral epicondylitis cases, and determine which one of these two common splints is more effective to reduce pain intensity and improve grip strength. Method: Thirty male and female patients with tennis elbow were selected from orthopedic Department at National institute of neurolocomotor system. All patients were randomly assigned into two groups. The group (A) (n=15, mean age: 44.8±6.87 years) received forearm support band for four weeks, while the group (B) (n=15, mean age: 42.86±6.34 years) received wrist splint. All patients received exercises (12 sessions, 3 sessions per week) over a four weeks period. They were evaluated using visual analogue scale to determine the pain intensity, and handheld dynamometer to determine hand grip strength in both groups. Results: The results of the current study revealed that forearm support band or wrist splint combination with exercises for four weeks in patients with tennis elbow resulted in significant increase in hand grip strength in the post-treatment, associated with a significant decrease in pain intensity in the post-treatment in both groups. In addition, it revealed that there was significant difference between forearm support and wrist splint as regard to pain reduction which wrist splint allows a greater degree of pain relief than the forearm support band for patients with lateral epicondylitis, while there was no difference as regard to grip strength improvement between both groups. Conclusion: It was concluded that forearm support band or wrist splint (cock-up splint) combined with exercises were effective in improving pain intensity and increasing hand grip strength in patient with tennis elbow, and wrist splint allows a greater degree of pain relief than the forearm support band.</p>		
Key words	1.	lateral epicondylitis.
	2.	Exercises.
	3.	forearm support band
	4.	wrist splint
	5.	Wrist.
Classification number	:	617.574.SHF
Arabic Title Page	:	الرباط الداعم للساعد مقابل الجبيرة الساندة في علاج التهاب اللقيمة الجانبية الوحشية لعظمة العضد.
Library register number	:	3697-3698.



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AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Huda Bader Abd el hamed Mohamed
Title	:	Correction of The Scapular Dyskinesia in Patients with Diabetic Frozen Shoulder Using a Muscle Energy Technique
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Deen Abd El Hakeem Balbaa,
	2.	Mohamed Omar Ahmed Soliman
	3.	Ghada Mohamen Rashde,
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>BACKGROUND:</b> Chronic mechanical low back pain (CMLBP) is the most common complaint of the working-age population. In addition to human suffering, it causes a substantial economic burden due to the wide use of medical services and absence from work The interest in the hip-LBP relationship is based on the proposal that limited hip motion will be compensated by motion in the lumbopelvic region. <b>OBJECTIVES:</b> The purpose of this study was to investigate if there a relationship between mechanical low back pain and hip lateral and medial rotators defeicnces (peak torque and Range of motion(ROM)) in patients with chronic mechanical low back pain CMLBP. <b>METHODS:</b> sixty patients had participated in this study. With age ranged from twenty to thirty years, their mean age was <math>(23.76 \pm 2.39)</math> years, mean weight was <math>(71.8 \pm 12.7)</math> (Kg), mean height was <math>(169.65 \pm 7.49)</math> (Cm) and mean BMI was <math>(25.5 \pm 3.86)</math> (Kg/m<sup>2</sup>). Low back pain was assessed by VAS, Hip internal and external rotation ROM was measured by fluid filled inclinometer and strength of internal and external rotators muscles were measured using concentric peak torque using 60/sec and 180/sec isokinetic speeds. <b>RESULT:</b> The results of this study demonstrated that there is insignificant relationship between pain and hip external rotation ROM, also there is insignificant relation between pain and hip internal rotation ROM. There is poor inverse relation between pain and hip internal rotators peak torque and hip external rotators peak torque in both speeds. <b>CONCLUSION:</b> It can be concluded that there is no significant relationship between pain and hip internal and external rotation peak torque. Also there is no significant relationship between pain and hip rotation ROM in patients with CMLBP.</p>		
Key words	1.	Frozen shoulder
	2.	scapular dyskinesia,
	3.	shoulder pain and disability index
	4.	Therapeutic ultrasound.
	5.	shoulder mobilization.
	6.	Shoulder.
Classification number	:	617.572.MHC
Arabic Title Page	:	إصلاح خلل حركه لوح الكتف فى مرضى الكتف المتجمد السكرى باستخدام تقنية الطاقة العضلية
Library register number	:	3737-3738.

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

Author	:	karim Mohamed Fawzy Ghoweba
Title	:	Effect of Positional Release Technique versus Kinesio Tape in Lower Back Myofascial Pain Syndrome
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa Aldeen Abd Al Hakeem Balbaa
	2.	Ghada Mohammed Rashad KOURA
	3.	Ahmed Hazem Abd el azeem
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Purpose:</b> to compare between the effects of positional release technique and kinesio taping technique on pain level, pressure pain threshold level and functional disability in patients with lower back myofascial pain syndrome. <b>METHODS:</b> Thirty patients from outpatient clinic of faculty of physical therapy Cairo University had participated in this study; they were randomly assigned in two groups (group A, B). Group A consisted of 15 patient (8 males and 7 females) with mean age 30.6 (<math>\pm 3.08</math>) years, received PRT technique. Group B consisted of 15 patients (5 males, 10 females) with mean age 30.4 (<math>\pm 3.35</math>) years, received kinesio taping technique. Both techniques were applied over trigger points of the iliocostalis lumborum bilaterally. Pain intensity, pressure pain threshold and functional disability were measured before and after treatment program. <b>RESULTS:</b> The results revealed that there was no significant difference between positional release technique and kinesio taping on pain level, pressure pain threshold and functional activities. <b>CONCLUSION:-</b> positional release technique and kinesio taping technique are effective in reducing pain level, improving pressure pain threshold and improving function in treating patients who suffering from lower back myofascial pain syndrome. As there was no statistical significant difference was proven between both of them.</p>		
Key words	1.	Positional release technique
	2.	kinesio tape
	3.	myofascial pain syndrome
	4.	Lower Back Pain
	5.	Back.
Classification number	:	617.5606
Arabic Title Page	:	تأثير تقنيه الانفراج الوضعي مقابل شريط كاينزيو في متلازمه الألم الليفي العضلي للظهر.
<b>Library register number</b>	:	<b>3761-3762.</b>

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

Author	:	Mahmoud Diab Abd El Haleem
Title	:	Relationship Between Chronic Mechanical Low Back Pain and Hip Rotators Deficiencies
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Deen Abd El Hakeem Balbaa,
	2.	Ashraf Abd El Kader EL Nahal
	3.	Ghada Mohamen Rashde,
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>BACKGROUND:</b> Chronic mechanical low back pain (CMLBP) is the most common complaint of the working-age population. In addition to human suffering, it causes a substantial economic burden due to the wide use of medical services and absence from work. The interest in the hip-LBP relationship is based on the proposal that limited hip motion will be compensated by motion in the lumbopelvic region. <b>OBJECTIVES:</b> The purpose of this study was to investigate if there is a relationship between mechanical low back pain and hip lateral and medial rotators deficiencies (peak torque and Range of motion (ROM)) in patients with chronic mechanical low back pain CMLBP. <b>METHODS:</b> sixty patients had participated in this study. With age ranged from twenty to thirty years, their mean age was <math>(23.76 \pm 2.39)</math> years, mean weight was <math>(71.8 \pm 12.7)</math> (Kg), mean height was <math>(169.65 \pm 7.49)</math> (Cm) and mean BMI was <math>(25.5 \pm 3.86)</math> (Kg/m<sup>2</sup>). Low back pain was assessed by VAS, Hip internal and external rotation ROM was measured by fluid filled inclinometer and strength of internal and external rotators muscles were measured using concentric peak torque using 60/sec and 180/sec isokinetic speeds. <b>RESULT:</b> The results of this study demonstrated that there is insignificant relationship between pain and hip external rotation ROM, also there is insignificant relation between pain and hip internal rotation ROM. There is poor inverse relation between pain and hip internal rotators peak torque and hip external rotators peak torque in both speeds. <b>CONCLUSION:</b> It can be concluded that there is no significant relationship between pain and hip internal and external rotation peak torque. Also there is no significant relationship between pain and hip rotation ROM in patients with CMLBP.</p>		
Key words	1.	Low Back Pain
	2.	Hip rotation ROM
	3.	Hip rotators strength
	4.	Low Back Pain
	5.	Back.
Classification number	:	617.5606.AMR
Arabic Title Page	:	العلاقة بين ألم أسفل الظهر الميكانيكي المزمن وقصور عضلات دوران الفخذ
Library register number	:	3717-3718.

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THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER  
AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

<b>Author</b>	:	Marihan Zakaria Aziz Makary
<b>Title</b>	:	Maitland's versus mulligan's mobilization techniques in Treatment of knee Osteoarthritis
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	<b>1.</b>	Khaled El Sayed Ayad
	<b>2.</b>	Magdolin Michel Samy
	<b>3.</b>	Waleed Reda Mohmed Awad Allah
<b>Degree</b>	:	<b>Master.</b>
<b>Year</b>	:	<b>2014.</b>
<b>Abstract</b>	:	
<p>Knee Osteoarthritis (OA) is a common musculoskeletal disorder affecting the knee joint and became a major cause of disability and socioeconomic burden. Joint mobility is considered one of major problems in knee OA. There is revolution of manual therapy techniques used for rehabilitation in osteoarthritic knee as Maitland's and Mulligan's techniques (MWM), and both of them have good effects on pain, range of motion and function but which of them is more beneficial , is not answered yet . <b>OBJECTIVE:</b> The purpose of this study was to investigate the difference between effects of Maitland versus MWM techniques on pain intensity, function and joint range of motion in patients with knee OA. <b>METHODS:</b> Thirty patients participated in this study; they were assigned into two experimental groups. With age ranged from 40 to 65. Group A consisted of 15 patients (11females and 4 males) with mean age 49.2 (<math>\pm 3.41</math>) years, received conventional program plus Maitland mobilization technique. Group B consisted of 15 patients (12 females and 3 males) with mean age 48.33 (<math>\pm 4.27</math>) years, received same conventional program plus MWM given 3times/week, for 2weeks. Patients were evaluated pre and post treatment for their pain severity, range of motion of knee joint and functional disability. <b>RESULTS:</b> the results revealed that there were improvement for all values for both groups but group B was more significant improvement for pain relief, range of motion and function. <b>CONCLUSION:</b> there is more significant immediate and short term effect of Mulligan on pain intensity, joint ROM and function in patients with knee OA than Maitland mobilization.</p>		
<b>Key words</b>	<b>1.</b>	Knee osteoarthritis
	<b>2.</b>	Maitland's mobilization
	<b>3.</b>	Mulligan's mobilization
<b>Classification number</b>	:	
<b>Arabic Title Page</b>	:	التليين اليدوي لميتلاند مقابل موليجان في علاج الالتهاب العظمي المفصلي للركبة
<b>Library register number</b>	:	<b>3899-3900.</b>

**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**

Author	:	Michael Mohsen Roshdy
Title	:	The effect of pulsed electromagnetic field and Pilates exercises on chronic mechanical low back pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Din Abd El Hakim Balbaa
	2.	Abd el Salam Ahmos El Hamamsy
	3.	Magdolin Mishel Samy
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p>The purpose of this study was to determine the effect of pulsed electromagnetic field and Pilates exercises on pain, functional disability and lumbar range of motion in patients with chronic mechanical low back pain. Methods: The study was carried out on 30 patients of both sexes (20 men and 10 women) who had mechanical low back pain with age ranged between 25-45 years. They were selected from the outpatient clinic of the general institute of health insurance. The patients were randomly assigned into two groups equal in number. Group (A) who received magnetic therapy for thirty minutes and Pilates exercises for twenty minutes 3 times per week for four weeks. Group (B) who received magnetic therapy for thirty minutes 3 times per week for four weeks. Assessment was conducted for both groups by Modified-Modified Schober test, for range of motion for lumbar region, and by Oswestry functional disability test for function disability and by visual analog scale (VAS) for pain assessment pre program, and post program, with duration 4 weeks of the treatment program. Results: The results of this study showed that there was significant improvement in pain, functional disability and range of motion for lumbar region; in group (A) than in group (B) with (<math>P &lt; 0.05</math>). Conclusion: It was concluded that Pilates exercises combined with electromagnetic therapy is better than electromagnetic therapy alone in dealing with signs and symptoms of chronic mechanical low back pain.</p>		
Key words	1.	Lumbar
	2.	Pilates
	3.	Electromagnetic
	4.	range of motion
	5.	exercises
Classification number	:	617.56.RME
Arabic Title Page	:	تأثير المجال الكهرومغناطيسي المتقطع و تمارينات بيلاتس على ألم أسفل الظهر الميكانيكي المزمن
Library register number	:	3639-3640.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL  
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AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mohamed Gumaa Bakry
Title	:	Relationship Between Lower Limb Static Alignment And The Occurrence Of Hamstring Muscles Injury In Egyptian Players
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	AlaaEldin Abdel Hakim Balbaa
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Year	:	2014.
Abstract	:	
<p><b>Background:</b> Hamstring muscles are the most commonly strained muscle group in runners and sprinters as well as in soccer players. In addition, hamstring muscles possess the highest recurrence rate among the reported strained muscles. Soccer players tend to cope with varying degrees of asymmetrical mechanical loads imposed on the lower limb musculoskeletal structure denoting that the functional and anthropometric profile of the players are a crucial aspect of the problem. Static alignment of the lower limb has been proposed to affect joint loads, muscle efficiency and proprioceptive feedback from limb joints. <b>Purpose:</b> to investigate if there is any association between lower limb static alignment and hamstring muscle strain injuries in Egyptian professional soccer players. <b>Participants:</b> 40 players were enrolled in this study; players were equally divided into two groups: injured and non-injured group. The injured group consisted of players who sustained hamstring strain injury in the past 2 years; the non-injured group consisted of players who did not sustain hamstrings strain injury. <b>Methods:</b> Each player was assessed for length measurements (total leg length measured from ASIS and umbilicus, femoral length and tibial length), limb circumference measurement (maximum thigh and calf circumference) and static alignment measurements (pelvic tilt angle, femoral neck anteversion angle, Q-angle, tibiofemoral angle, genu recurvatum, tibial torsion and navicular drop). <b>Results:</b> non-significant differences in static alignment asymmetry between the injured and un-injured limbs in the injured group players as well between the injured and non-injured groups. <b>Conclusion:</b> Static lower limb asymmetry is not a risk factor for the occurrence of hamstrings strain injury.</p>		
Key words	1.	hamstrings strain
	2.	static alignment
	3.	Asymmetry
	4.	risk factor
	5.	Athletes.
Classification number	:	617.1027.BMR
Arabic Title Page	:	العلاقة بين المحاذاة الثابتة للطرف السفلي و إصابة عضلات الفخذ الخلفية في اللاعبين المصريين.
Library register number	:	3765-3766.



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AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Noha Abd El Salam El Hadidi
Title	:	Effect of flat foot associated with posterior tibial tendon dysfunction syndrome on dynamic balance
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El Sayed Ayad
	2.	Magdolin Mishel Samy
	3.	Hesham Shokry Aly
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> The foot is the most distal segment in the lower extremity chain and represents a relatively small base of support on which the body maintains balance. Although it seems reasonable that even minor biomechanical alterations in the support surface may influence postural-control strategies, the implications of a flat foot associated with posterior tibial tendon dysfunction on balance have received little attention to date. <b>Subjects:</b> Sixty subjects participated in the study and their ages ranged from 16 to 25 years. They were divided into 30 normal subjects group (A) and 30 patients diagnosed as flat foot associated with posterior tibial tendon dysfunction (PTTD). <b>Methods:</b> The Biodex Balance System was used to measure stability index and posture sway during double-limb stance under eyes-open condition at stability level (5). <b>Results:</b> The results of the study revealed no significant difference between two groups in overall stability index, anterior -posterior stability index, and medio-lateral stability index. <b>Conclusions:</b> It was concluded that postural stability is not affected by flatfoot with PTTD on dynamic conditions. These results should be considered when clinicians use such balance measures to assess injury deficits and recovery. <b>Motivation Statement:</b></p>		
Key words	1.	Flat foot
	2.	Posterior Tibial Tendon Dysfunction
	3.	postural sway
	4.	foot mechanics
	5.	dynamic balance
Classification number	:	617.3.ENE
Arabic Title Page	:	تأثير تفلطح القدم المصاحب لمتلازمة الاختلال الوظيفي للوتر القصبي الخلفي على الاتزان الديناميكي.
Library register number	:	3629-3630.

**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**

Author	:	Samia Samuel Amin
Title	:	Positional Release Technique Versus Stretching Exercises in Treatment of Cervical Spondylosis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Dien Abd Elhakim Balbaa
	2.	Abdel Salam Ahmos El Hamamsy
	3.	Magdolin Mishel Samy
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Cervical spondylosis is a degeneration of the intervertebral cervical discs. The risk of cervical spondylotic changes rapidly increases in younger patients with poor habitual postures and activities due to excessive biomechanical stress. <b>Objective:</b> The purpose of this study was to compare between the effect of stretching exercises versus positional release technique on pain intensity, functional neck disability and range of cervical mobility in patients with cervical spondylosis. <b>Methods:</b> Thirty patients had participated in this study; they were randomly assigned into two experimental groups. With age ranged from 30 to 45 years. <i>Group (A):</i> Consisted of 15 patients (9 males and 6 females) with mean age of 35.36 (<math>\pm 6.10</math>), they received stretching exercises and physical therapy program that included infra-red heat, ultrasound and Isometric strengthening exercises for neck muscles. <i>Group (B):</i> Consisted of 15 patients (10 males and 5 females) with mean age of 37.53 (<math>\pm 6.13</math>) received positional release technique and the same physical therapy program. Both were assessed using VAS for pain assessment, neck disability index for functional neck disability and "Myrin" OB Goniometer for assessing cervical range of motion. <b>Results:</b> Both stretching exercises and positional release technique showed a significant improvement in pain intensity, improvement in neck functional disability and both techniques increased the range of cervical mobility; with no significant difference between both groups. <b>Conclusion:</b> Application of either stretching exercises or positional release technique is effective in reducing pain, decreasing neck functional disability and increasing the range of cervical mobility in patients with cervical spondylosis.</p>		
Key words	1.	Cervical spondylosis
	2.	stretching exercises
	3.	positional release technique
	4.	Exercises in Cervical Spondylosis.
	5.	Cervical syndrome.
Classification number	:	616.73.ASP
Arabic Title Page	:	الإنفراج الوضعي مقابل تأثير تمرينات الإستطالة في حالات خشونة الرقبة
Library register number	:	3757-3758.

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THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER  
AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Wafaa Atef Abd Allah
Title	:	Efficacy Of Adding Strengthening Exercises Of Ankle Muscles In Treatment Of Knee Osteoarthritis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ibrahim Magdy El Nagger
	2.	Nehad Mahmoud Elmahboub
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Purpose:</b> The purpose of this study was to clarify the effect of adding strengthening exercises of ankle dorsiflexors and plantar flexors in treatment of patients with primary knee osteoarthritis. <b>Subjects:</b> Thirty patients diagnosed as primary unilateral knee osteoarthritis were referred from orthopedic surgeons. <b>Methods:</b> Patients were randomly distributed into two equal groups. The first experimental group consisted of 15 patients with median age 43.0(40.0-53.0) years, median weight 88.0(65.0-130.0) kg , median height 160.0(150.0-165.0) cm ,and median duration of illness 6.0(3.0-24.0) months. They received infrared radiation followed by a program of therapeutic exercises which included: hamstring and calf stretching exercises, and quadriceps and hamstring strengthening exercises. The second experimental group consisted of 15 patients with median age 42.0(40.0-54.0) years, median weight 86.0(68.0-130.0) kg , median height 155.0(150.0-169.0) cm , and median duration of illness 6.0(3.0-12.0) months . They received the same program of the first group in addition to strengthening exercises of ankle dorsiflexors and plantar flexors. Treatment was given 3 times per week, each other day, for 4 consecutive weeks. Patients were evaluated pretreatment and posttreatment for knee pain severity, isometric muscle strength of quadriceps, hamstring and ankle dorsiflexors and plantar flexors, in addition to static balance and dynamic balance as well as functional ability. <b>Results :</b> Patients of both groups showed significant improvements in all measured variables. In between groups difference, the second group showed a significant improvement than the first group in knee pain severity, isometric ankle dorsiflexors strength and dynamic balance. But there were no significant differences in quadriceps, hamstring and plantar flexors isometric strength, static balance and functional ability. <b>Conclusion:</b> Both strengthening exercises group had a significant effect on decreasing knee pain severity, improving isometric muscle strength of quadriceps, hamstring and ankle dorsiflexors and plantar flexors, improving static and dynamic balance as well as functional ability. However adding strengthening exercises of ankle dorsiflexors and plantar flexors were more effective in improving knee pain severity, isometric ankle dorsiflexors strength and dynamic balance.</p>		
Key words	1.	Dynamic balance.
	2.	Pain severity
	3.	Dorsiflexors
	4.	Plantar flexors
	5.	Static balance
	6.	Osteoarthritis
Classification number	:	616.7223.AWE
Arabic Title Page	:	فعالية اضافة تمارينات التقوية لعضلات الكاحل في علاج التهاب المفصلى العظمى للركبة.
Library register number	:	3679-3680.

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AND ITS SURGERY  
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Waleed Saber Ahmed Hassan
Title	:	Proprioception deficit and Risk of Falling in Hemophilic Knee Arthropathy
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled Elsayed Ayad
	2.	Magdolin Misheal Samy
	3.	Magdi Abd Elhady Alekiaby
Degree	:	Master.
Year	:	2014.
Abstract	:	
<p><b>Background:</b> Musculoskeletal disorders in patients with hemophilia represent the highest percentage of lesions, which predominantly affect lower limbs, balance control, standing and walking. The impact of hemophilic arthropathy on proprioception and falls risk is relatively under-explored. <b>Purpose:</b> this study was conducted to investigate the effect of knee arthropathy in hemophilic patients on proprioception and risk of falling compared to normal subjects and find out the relation between them. <b>Subjects:</b> One hundred subjects had participated in this study; they were assigned into two groups. The study group (A) consisted of 50 patients with a mean age of (15.64±1.56) years; the control group (B) which consisted of 50 subjects with a mean age of (15.76±1.54) years. All subjects were tested using Biodex isokinetic dynamometer and Berg Balance Scale. This study was conducted in the laboratory of Faculty of Physical Therapy, Cairo University. <b>Results:</b> There was a significant difference between the study group compared to control group in the Angle Reproduction Accuracy Test and Berg Balance Scale and a strong negative correlation between Angle Reproduction Accuracy and Berg Balance Scale. <b>Conclusion:</b> The results of this study showed differences in proprioceptive performance of the knee as measured by the angle-reproduction test between the hemophilic patients and controls. Additionally, the risk of falling was distinctly higher in the haemophilic subjects. The results highlighted the importance of developing a specialized training for patients with hemophilia to improve proprioceptive performance and balance control, with specific relevance to situations encountered in daily life.</p>		
Key words	1.	Falling in Hemophilic Knee Arthropathy
	2.	Knee Arthropathy
	3.	proprioception
	4.	risk of falling
	5.	Hemophilia.
Classification number	:	616.1572.HWP
Arabic Title Page	:	إختلال الحس العميق و خطر الوقوع فى حالات اعتلال مفصل الركبة الناتج عن سيولة الدم.
Library register number	:	3671-3672.