Abstract

Background: 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. Purpose: 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. Patients and methods: 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. Results: 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. Conclusion: Scapular stabilization exercises should be used as an integral part in the rehabilitation program for patients with chronic neck pain.

Key words

1. Neck pain
2. Neck stabilization exercises
3. Scapular stabilization exercises
4. Exercises.

Classification number : 617.371.AAE

Arabic Title Page : تأثير تمرینات ثبت لوح الکتف على حالات ألّم الرقبة المزمنة.

Library register number : 3677-3678.
Electrical Guide to theses approved by Physical Therapy Department for musculoskeletal disorder and its surgery
Prepared by Nerween Abd El Salam Abd El Kader Ahmed

<table>
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<tr>
<th>Author</th>
<th>Amna El-Hadi Khalifa</th>
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<tr>
<td>Title</td>
<td>Effect of Electroacupuncture on Pain and Functional Performance in Patients with Discogenic Sciatica</td>
</tr>
<tr>
<td>Dept.</td>
<td>Physical Therapy Department for musculoskeletal disorder and its Surgery.</td>
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<tr>
<td>Supervisors</td>
<td>1. Amir Mohamed Saleh.</td>
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<td></td>
<td>2. Mahmoud Alm Eldin Hafez.</td>
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<tr>
<td>Degree</td>
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<td>Year</td>
<td>2014.</td>
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<tr>
<td>Abstract</td>
<td>Background: 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. Purpose: The purpose of this study was to evaluate the effect of Electroacupuncture on pain and functional performance in patients with discogenic sciatica. Subjects: Thirty patients with discogenic sciatica (mean age 45.8 ± 2.48 years, height 176.66 ± 7.39 cm, weight 72.86 ± 7.32 kg, and BMI 23.29 ± 1.09 kg/m²) participated in this study. Materials and Methods: 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. Results: There were a significant differences regarding VAS and ODI pre &amp; post treatment in both groups, as pain intensity measurement for group (A) showed (7.53 ±1.45) pre treatment and showed (4.8±1.89) post treatment. In group (B) showed (7.73±1.53) pre treatment and showed (3.53±0.99) post treatment. But regarding ODI group(A) showed (51.86±17.5) pre treatment and showed (37.2±12.0) post treatment. In group (B) showed (51.0±11.88) pre treatment and showed (27.06±8.64) post treatment. There were a significant difference between both groups post treatment for pain intensity measurement and for ODI. Conclusion: 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.</td>
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<tr>
<td>Key words</td>
<td>1. Sciatica</td>
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<td>616.7892.KAE</td>
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<td>Arabic Title Page</td>
<td>تأثير الوخز بالإبر الكهربائي على الألم والأداء الوظيفي في مرضى عرق النسا المصاحب للإنزلاق الغضروفي.</td>
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**Abstract**

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 in patients with knee osteoarthritis, 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.

**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 | اللبزر منخفض الشدة مقابل تدريب المستقبلات الحسية العميقة في علاج الالتهاب |
| Library register number | 3873-3874. |
**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 Sayed Ayad  
2. Mervat Abdel Hameed El Tokhy  
3. Magdoline Mishel Samy Shenouda  
**Degree** : Master.  
**Year** : 2014.  

**Abstract**  
Background: 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. Objective: 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. Methods: 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). Results: A significant difference was found for both supraspinatus and middle deltoid muscles, indicating that the gripping resulted in increasing muscle activity. Conclusion: 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.  

**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 الحصار الكتف.  
**Library register number** : 3641-3642.
### Background
Degenerative changes are often asymptomatic, but can lead to neck pain and stiffness. Purpose: To compare between the effect of positional release technique and post isometric relaxation technique in treatment of patients with cervical spondylosis. Subjects: 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 (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). Results: 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. Conclusions: 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.

### Key words
1. Positional release technique.
2. Post isometric relaxation technique.
Objective: 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.

Methods: 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. Results: 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. Discussion and Conclusion: 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.

| Key words | 1. Under
|           | 2. Water exercises
|           | 3. Land
|           | 4. Based exercises
|           | 5. Functional activity.
|           | 6. Knee
|           | 7. Quadriceps muscle strength
|           | 8. Pain

| Classification number | 616.7223.MBU
| Arabic Title Page | انتخاب التمارين الارضية في علاج الالتهاب المفصلي للركبة.
| Library register number | 3739-3740.
Efficacy of laser acupuncture in the treatment of sciatica

DESGIN : 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. RESULTS: 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. CONCLUSION: The laser needle application on acupuncture points described in this study is efficient in treating sciatica and associated 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.

Key words
1. Sciatica
2. Laser
3. Acupuncture
4. McKenzie exercises
5. Sciatica.

Classification number : 616.7892.SDE

Arabic Title Page : فاعالية الوخز بالليزر في علاج التهاب عصب النساء.

Library register number : 3699-3700.
**Abstract**

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 instate 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 analoug 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.

**Key words**

1. lateral epicondylitis.
2. Exercises.
3. forearm support band
4. wrist splint
5. Wrist.

**Classification number** : 617.574.SHF

**Arabic Title Page** : الربط الداعم للمساعد مقايلي الجبيرة السائدة في علاج التهاب اللقيمة الجانبية الوحشية لعظمة العضد.

**Library register number** : 3697-3698.
BACKGROUND: 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. OBJECTIVES: The purpose of this study was to investigate if there is a relationship between mechanical low back pain and hip lateral and medial rotators deficiences (peak torque and Range of motion (ROM)) in patients with chronic mechanical low back pain (CMLBP). METHODS: sixty patients had participated in this study. With age ranged from twenty to thirty years, their mean age was (23.76±2.39) years, mean weight was (71.8±12.7) (Kg), mean height was (169.65±7.49) (Cm) and mean BMI was (25.5±3.86) (Kg/m²). 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. RESULT: The results of this study demonstrated that there is an 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. CONCLUSION: 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.

Key words

1. Frozen shoulder
2. scapular dyskinesia,
3. shoulder pain and disability index
4. Therapeutic ultrasound.
5. shoulder mobilization.

Classification number : 617.572.MHC

Arabic Title Page : إصلاح خلل حركة لوح الكنف في مرضى الكنف المتجمد السكري باستخدام تقنية الطاقة العضلية

Library register number : 3737-3738.
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<th>Author</th>
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<tr>
<td>Title</td>
<td>: Effect of Positional Release Technique versus Kinesio Tape in</td>
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<td>: Lower Back Myofascial Pain Syndrome</td>
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<td>Supervisors</td>
<td>1. Alaa Aldeen Abd Al Hakeem Balbaa</td>
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<td>2. Ghada Mohammed Rashad KOURA</td>
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<td>3. Ahmed Hazem Abd el azeem</td>
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<td>Year</td>
<td>: 2014.</td>
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<td>Abstract</td>
<td>: Purpose: 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. METHODS: 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 (±3.08) years, received PRT technique. Group B consisted of 15 patients (5 males, 10 females) with mean age 30.4 (±3.35) years, received kinesio taping technique. Both techniques were applied over trigger points of the iliocostalislumborum bilaterally. Pain intensity, pressure pain threshold and functional disability were measured before and after treatment program. RESULTS: 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. CONCLUSION: 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.</td>
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<tr>
<td>Key words</td>
<td>1. Positional release technique</td>
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<td>2. kinesio tape</td>
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<td>4. Lower Back Pain</td>
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<td>Classification number</td>
<td>: 617.5606</td>
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<tr>
<td>Arabic Title Page</td>
<td>: تأثير تقنيه الانفراج الوضعي مقابل شريط كاينزيو في متلازمة الام اللفي العضلي للظهر.</td>
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**BACKGROUND:** 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. **OBJECTIVES:** 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). **METHODS:** sixty patients had participated in this study. With age ranged from twenty to thirty years, their mean age was (23.76±2.39) years, mean weight was (71.8±12.7) (Kg), mean height was (169.65±7.49) (Cm) and mean BMI was (25.5±3.86) (Kg/m²). 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. **RESULT:** 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. **CONCLUSION:** 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.

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<td>العلاقة بين الم أسفل الظهر الميكانيكي المزمن وقصور عضلات دوران الفخذ</td>
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<td>Library register number</td>
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Author: Marihan Zakaria Aziz Makary
Title: Maitland's versus mulligan's mobilization techniques in Treatment of knee Osteoarthritis
Dept.: Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors:
1. Khaled El Sayed Ayad
2. Magdolin Michel Samy
3. Waleed Reda Mohmed Awad Allah
Degree: Master.
Year: 2014.

Abstract:
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.

OBJECTIVE: 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.

METHODS: 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 (11 females and 4 males) with mean age 49.2 (±3.41) years, received conventional program plus Maitland mobilization technique. Group B consisted of 15 patients (12 females and 3 males) with mean age 48.33 (±4.27) 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.

RESULTS: 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.

CONCLUSION: 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.

Key words:
1. Knee osteoarthritis
2. Maitland's mobilization
3. Mulligan's mobilization

Classification number:

Arabic Title Page: التليين البدوى لميتلاند مقابل موليانج في علاج الالتهاب العظمي المفصلي للركبة

Library register number: 3899-3900.
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 (P < 0.05). 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.
Background: 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. Purpose: to investigate if there is any association between lower limb static alignment and hamstring muscle strain injuries in Egyptian professional soccer players. Participants: 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. Methods: 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). Results: 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. Conclusion: Static lower limb asymmetry is not a risk factor for the occurrence of hamstrings strain injury.

| 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. |
# 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
Background: 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. Subjects: 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). Methods: 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). Results: 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. Conclusions: 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. Motivation Statement:

# 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 تقلط القدم المصاحب لمتلازمة الاختلال الوظيفي للوتر القصبي الخلفي على الالتزان الديناميكي.

# Library register number
3629-3630.
# Positional Release Technique Versus Stretching Exercises in Treatment of Cervical Spondylosis

## Method

### Objective
The purpose of this study was to compare 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.

### Methods
Thirty patients had participated in this study; they were randomly assigned into two experimental groups. With age ranged from 30 to 45 years. Group (A): Consisted of 15 patients (9 males and 6 females) with mean age of 35.36 (±6.10), they received stretching exercises and physical therapy program that included infra-red heat, ultrasound and Isometric strengthening exercises for neck muscles. Group (B): Consisted of 15 patients (10 males and 5 females) with mean age of 37.53 (±6.13) 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.

### Results
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.

### Conclusion
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.

## Keywords
1. Cervical spondylosis
2. Stretching exercises
3. Positional release technique
4. Exercises in Cervical Spondylosis
5. Cervical syndrome.
Efficacy Of Adding Strengthening Exercises Of Ankle Muscles In Treatment Of Knee Osteoarthritis

Purpose: 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. Subjects: Thirty patients diagnosed as primary unilateral knee osteoarthritis were referred from orthopedic surgeons. Methods: 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. Results: 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. Conclusion: 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.
Background: 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. Purpose: 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. Subjects: 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. Results: 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. Conclusion: 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.

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