

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

**Doctoral Degree  
2013**

<b>Author</b>	:	Abdelhalim Z. Nada.
<b>Title</b>	:	Neuromuscular Electrical Stimulation Combined with Ponseti Method for Correction of Idiopathic Clubfoot
<b>Dept.</b>	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
<b>Supervisors</b>		<ol style="list-style-type: none"><li>1. Nadia Abd El-Azim Fayaz.</li><li>2. Manal Mohamed Ismail.</li><li>3. Aliaa Mohammed Rehan Youssef.</li><li>4. Amr Abdalla Azzam.</li></ol>
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2013.
<b>Abstract</b>	:	<p><b>Background:</b> Clubfoot is commonly corrected using the Ponseti or the French physiotherapy methods. The Ponseti method is usually the method of choice, although casting used in this method temporarily deprives the infant from performing active movement and using the limb muscles. Thus, an application of electrical stimulation during the casting period could improve patient's outcomes. <b>Purpose:</b> The purpose of this study was to investigate the effects of Neuromuscular Electrical Stimulation (NMES) combined with Ponseti method in correcting idiopathic clubfoot. <b>Methodology:</b> Twenty-nine infants (39 feet), with age ranged from one week to 10 weeks were randomly assigned into two groups: group A, (n= 18 feet) received Ponseti method combined with neuromuscular electrical stimulation, and Group B (n=21 feet) received the standard Ponseti method. Both groups were followed up through the treatment until correction occurred or tenotomy was done. Assessment was done by measuring Pirani score, Ankle Dorsiflexion (DF) range, Foot Length (FL), and Calf Circumference (CC). <b>Results:</b> Comparing infants before and after treatment showed significant improvement in calf circumference, ankle dorsiflexion , foot length, and Pirani scores over time in the two groups (P&lt;0.001). However, there was no significant difference between two groups (P&gt; 0.05). <b>Conclusion:</b> Based on our results, Standard Ponseti, with or without Neuromuscular Electrical Stimulation (NMES) addition significantly corrected the clubfoot. However, there was no therapeutic value for NMES to the standard Ponseti method.</p>
<b>Key words</b>		<ol style="list-style-type: none"><li>1. Talipes Equinovarus (CTEV)</li><li>2. Neuromuscular Electrical Stimulation (NMES)</li><li>3. Ponseti method</li><li>4. Idiopathic Clubfoot.</li></ol>
<b>Arabic Title Page</b>	:	التنبيه العصبى العضلى الكهربائى مع طريقة بونسى لتصحيح القدم الحرقلة.
<b>Library register number</b>	:	2549-2550.

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

<b>Author</b>	:	Enas Anwar Abd EL Aty.
<b>Title</b>	:	Patellar Versus Antipronation Taping In Treatment Of Patellofemoral Pain Syndrome.
<b>Dept.</b>	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
<b>Supervisors</b>	1.	Khaled El Sayed Ayad.
	2.	Nagwa Ahmed Awad.
	3.	Lilian Albert Zaky.
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2013.
<b>Abstract</b>	:	
<p>Patellofemoral pain syndrome (PFPS) is the most common cause of knee pain in the outpatient setting. It is caused by imbalances in the forces which controlling patellar tracking during knee flexion and extension. <u>The purpose</u> of this study was to compare between the effect of antipronation foot taping versus patellar taping in treatment of patients suffering from PFPS and pronated foot. <u>Patients , Materials and Methods:</u> Forty five males and females patients aging between 20-40 years old with body mass index (BMI) less than 35 Kg/m<sup>2</sup> participated in this study. All patients were suffering from PFPS and foot pronation characterized by navicular drop exceeding 9 mm. Patients were divided randomly into three equal groups. Group (A): 15 patients were treated with patellar taping in addition to the traditional physical therapy program ; Group (B): 15 patients were treated with Low -Dye taping on the foot in addition to the traditional physical therapy program; Group (C): 15 patients were treated only with traditional physical therapy program. All patients were assessed before any intervention (pretreatment test) and after 2 weeks (posttreatment test) .The measured variables were : navicular drop; lateral displacement of the patella measured from Merchant's x-ray view; functional level measured by Kujala patellofemoral score and level of pain by VAS. <u>Results:</u> showed that traditional physical therapy when combined with either patellar or Low-Dye taping all have significantly improved pain level , functional level, and lateral patellar displacement, while combination of traditional physical therapy with Low-Dye taping has more significant effect on the functional level of patients with PFPS. <u>Conclusion:</u> addition of antipronation foot taping to the traditional physical therapy program has more significant effect in improving function in patients with PFPS combined with pronated foot.</p>		
<b>Key words</b>	1.	Patellofemoral pain syndrome.
	2.	foot pronation
	3.	Taping.
<b>Arabic Title Page</b>	:	استخدام الشريط الرضفي مقابل الشريط مضاد الكعب في علاج آلام المفصل الرضفي الفخذي.
<b>Library register number</b>	:	3517-3518.

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

<b>Author</b>	:	<b>Heba Tullah Mohammed Said Zaghloul</b>
<b>Title</b>	:	<b>Effect of spinal flexion versus spinal extension exercises on pain severity,H-reflex and centralization phenomenon in lumbosacral radiculopathy.</b>
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	1.	<b>Ibrahim Magdy Elnagaar.</b>
	2.	<b>Hala Rashad El-habashi.</b>
	3.	<b>Lilian Albert Zaky.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2013.</b>
<b>Abstract</b>	:	
<p>The purpose of this study was to investigate the effect of spinal flexion exercises versus spinal extension exercises , on low back pain severity , leg pain severity , centralization phenomenon , H-reflex latency and amplitude in patients with unilateral lumbosacral radiculopathy as a result of disc herniation at the level of L5-S1.The results of this study revealed that both types spinal flexion and extension exercises were significantly effective for reduction of low back and leg pain severity as well as decreasing H-reflex latency and increasing amplitude in patients with unilateral lumbosacral radiculopathy as a result of disc herniation at the level of L5-S1.The spinal extension exercises were more significantly effective than spinal flexion exercises in <b>centralization of low back pain in patients with lumbosacral radiculopathy.</b></p>		
<b>Key words</b>	1.	<b>low back pain</b>
	2.	<b>lumbosacral radiculopathy</b>
	3.	<b>spinal flexion exercises</b>
	4.	<b>spinal extension exercises</b>
	5.	<b>H-reflex amplitude</b>
	6.	<b>H-reflex latency</b>
	7.	<b>centralization phenomenon</b>
<b>Arabic Title Page</b>	:	<b>تأثير تمارين اللفظي مقابل تمارين الفرد الفقري على شدة الألم وعلى منعكسة هوفمان وظاهرة المركزية في اعتلال جذور الاعصاب القطنية العجزية.</b>
<b>Library register number</b>	:	<b>3579-3580.</b>

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

<b>Author</b>	:	<b>Ibrahim MetwallyHegazyDewir</b>
<b>Title</b>	:	<b>The efficacy of trunk endurance exercises in the treatment of chronic mechanical low back pain</b>
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	1.	<b>Nadia Abd-Alazem Fayaz.</b>
	2.	<b>Hisham Mesbah Soliman.</b>
	3.	<b>Mona Hassan Gamal.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2013.</b>
<b>Abstract</b>	:	
<p>The aim of this study is to detect the effect of trunk endurance exercises in the treatment of chronic low back pain. Thirty patients participated in this study and selected randomly to be divided into group A (10 males and 5 females) subjected rehabilitation program , infrared radiation in addition to back extensor endurance exercise, and group B (10 males and 5 females) subjected rehabilitation program ,and infrared radiation. Patients of both groups were assessed by visual analogue scale, Oswestry scale, modified Scober test, and Sorensen test at the beginning of the treatment and after 2 and 4 weeks. Results showed tha, after 2 weeks of treatment there were a significant increase in back extension holding time in group A more than group B but there were no significant difference in pain, function, and mobility of the spine, after 4 weeks of treatment there were a significant increase in back extension holding time, and function, with significant decrease in pain in group A more than group B, but no significant difference in mobility of the spine.</p>		
<b>Key words</b>	1.	<b>chronic mechanical low back pain</b>
	2.	<b>back endurance exercises</b>
	3.	<b>Sorensen test</b>
	4.	<b>Exercises - back endurance.</b>
<b>Arabic Title Page</b>	:	<b>فعالية تمارينات التحمل للجذع في علاج الام اسفل الظهر الميكانيكيه المزمنه.</b>
<b>Library register number</b>	:	<b>3581-3582.</b>

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

<b>Author</b>	:	<b>Khaled Mohamed Al Shorbagy.</b>
<b>Title</b>	:	<b>Efficacy of Physiotherapy Program After Arthroscopic Anterior Shoulder Stabilization.</b>
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	1.	<b>Manal Mohamed Ismail.</b>
	2.	<b>Ahmed Rezk Mohamed.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2013.</b>
<b>Abstract</b>	:	
<p><b>Background:</b> Recurrent anterior shoulder instability is a common result of anterior dislocation or traumatic subluxation, especially in young ages. Arthroscopic anterior shoulder stabilization becomes the standard of care with advances in arthroscopic techniques and increased success in patient outcomes after this procedure. <b>Objective:</b> The purpose of this study was to determine the efficacy of physiotherapy program after arthroscopic anterior shoulder stabilization. <b>Methods:</b> 27 patients with ages ranged from 18 to 35 years had recurrent anterior shoulder instability treated with arthroscopic anterior shoulder stabilization with suture anchors participated in the study. They were randomly assigned into two groups. The experimental group received supervised physical therapy program for 6 months. The control group received instructions and illustrations for exercises to be followed at home for 6 months. Patients were assessed 3 times at 3, 12 and 24 week post operative for pain; shoulder range of motion; quality of life using the visual analogue scale; goniometer and Western Ontario Shoulder Instability Index. Assessment of functional impairment and endurance; and functional recovery were done 2 times at 12 and 24 postoperative week using Closed Kinetic Chain Upper Extremity Stability Test, and Functional Impairment Test-Head and Neck/Shoulder/Arm. <b>Results and conclusion:</b> There was a significant difference in the mean values of all measured outcomes among the three measurement times for both groups; that showed the effectiveness of physiotherapy program in improving shoulder functioning after arthroscopic stabilization. There was no significant difference in the mean values of all measured outcomes among the three measurement times between both groups.</p>		
<b>Key words</b>	1.	<b>Physiotherapy Program</b>
	2.	<b>Arthroscopic Anterior Shoulder Stabilization.</b>
<b>Arabic Title Page</b>	:	<b>فاعلية برنامج علاج طبيعي بعد عملية التثبيت الأمامي للكتف بالمنظار.</b>
<b>Library register number</b>	:	<b>3433-3434.</b>



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

<b>Author</b>	:	<b>Magdy Mohamed Aly Shabana.</b>
<b>Title</b>	:	<b>Immediate unrestricted versus graduated weight bearing after primary cementless total hip arthroplasty.</b>
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	1.	<b>Khaled Elsayed Ayad.</b>
	2.	<b>Mohamed Abd El Fatah Hassan.</b>
	3.	<b>Lilian Albert Zaky.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2013.</b>
<b>Abstract</b>	:	<p><b>BACKGROUND:</b> Few guidelines are available about whether immediate unrestricted weight-bearing after a cementless total hip arthroplasty (THA) can be recommended or not. Stability and ingrowth may be jeopardized by immediate loading of the implant while functional recovery may be promoted. <b>PATIENTS AND METHODS:</b> A prospective study of 20 patients with cementless THA and have been selected and divided into immediate unrestricted group (A), and graduated weight-bearing group (B). The clinical assessment using Harris hip score (HHS) and short physical performance battery (SPPB) started initially immediately after surgery, then after 6 weeks and then after 12 weeks. Radiographs were evaluated digitally for vertical migration of femoral stem. <b>RESULTS:</b> Postoperatively, HHS and so SPPB showed no group difference. There was no statistical significant difference between the HHS and SPPB measured at different times of assessment in the two studied groups. While, there was statistical significant increase in the HHS and SPPB in 6 weeks and 12 weeks when compared to initial assessment in each group. At the same time, HHS and SPPB were significantly increased in 12 week assessment when compared to 6 week assessment. Radiological vertical micromigration of femoral stem assessments have revealed no statistical significant difference between group A and group B , while In each group, there is statistical significant difference in radiological vertical micromigration of femoral stem between initial assessment and 6 weeks and 12 weeks however there is no statistical significant difference between assessments of 6 weeks and 12 weeks. <b>INTERPRETATION:</b> We found no adverse effect of immediate unrestricted weight bearing with cementless total hip arthroplasty.</p>
<b>Key words</b>	1.	<b>Hip arthroplasty.</b>
	2.	<b>Weight bearing.</b>
	3.	<b>Gait training.</b>
	4.	<b>Cementless.</b>
	5.	<b>Immediate.</b>
<b>Arabic Title Page</b>	:	<b>تحميل الوزن المبكر الغير محدود فى مقابل التحميل التدريجى بعد الاستبدال الابتدائى الكلى لمفصل الفخذ الغير أسمنتى.</b>
<b>Library register number</b>	:	<b>3483-3484.</b>

<b>Author</b>	:	<b>Mona Selim Faggal.</b>
<b>Title</b>	:	<b>Predictors of shoulder injuries in collegiate swimmers.</b>
<b>Dept.</b>	:	<b>Physical Therapy Department for musculoskeletal disorder and its Surgery.</b>
<b>Supervisors</b>	1.	<b>Alaa Eldin Balbaa.</b>
	2.	<b>Mona Hasan Gamal Eldin.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2013.</b>
<b>Abstract</b>	:	<p><b>Background.</b> Shoulder pain and associated glenohumeral (GH) joint movement dysfunctions are common and debilitating conditions. Competitive swimming is a sport long popular all over the world. Shoulder pain is the most common orthopedic problem in competitive swimming. <b>Purpose.</b> purpose of this study was to provide descriptive information about characteristics of swimmers and identify significant predictors that were associated with collegiate swimmers shoulder problems. <b>Methods.</b> This study was conducted on 30 collegiate swimmers aging between 17 to 22 years (16 male and 14 female) of Cairo University throughout the season 2011-2012. Subjects were examined at the beginning of the season then followed up through the whole season (8 months). At the end of the season 9 swimmers (30%) had shoulder injuries that interfered with training or competition. Swimmers were divided into two groups, injured (n=9) and non-injured (n=21). <b>Results.</b> ANOVA test was used to compare between groups. The results indicate non-significant difference in age, swimming years, tightness of pectoralis minor, shoulder internal and external rotation, shoulder isometric muscle strength, scapular posture symmetry, and shoulder functional performance between groups. The results indicate significant difference in exposure and shoulder horizontal adduction between groups, indicating a significant association between exposure and shoulder horizontal adduction with incidence of shoulder injury. <b>Conclusion.</b> Exposure and shoulder horizontal adduction are significant predictors of shoulder injuries in colligate swimmers.</p>
<b>Key words</b>	1.	<b>Swimmer's shoulder.</b>
	2.	<b>Shoulder Injury.</b>
	3.	<b>scapular posture symmetry.</b>
<b>Arabic Title Page</b>	:	<b>التنبؤ بإصابات الكتف في السباحين الجامعيين.</b>
<b>Library register number</b>	:	<b>3131-3132.</b>

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

<b>Author</b>	:	Shahesta Ahmed Osama Ghally Supervisors.
<b>Title</b>	:	The combined effect of myofascial therapy and therapeutic exercises versus therapeutic exercises in treatment of shoulder impingement syndrome.
<b>Dept.</b>	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
<b>Supervisors</b>	1.	Alaa A. Balbaa.
	2.	Hatem Mohammed Elazizi.
	3.	Lilian Albert Zakiy.
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2013.
<b>Abstract</b>	:	
<p>the purpose: of thesis is to stud examine the effect of myofascial therapy and therapeutic exercises versus therapeuticexercises in treatment of shoulder impingement syndrome.Subjects: Thirty patients diagnosed as shoulder impingement syndrome stage II Neer classification due to mechanical causes. Methods: Patients were randomly distributed into two equal groups. The first experimental group consisted of 15 patients with a mean age of 36.47(<math>\pm</math>6.68) years; received myofascial release followed by a program of therapeutic exercises. The second experimental group consisted of 15 patients with a mean age of 36.26(<math>\pm</math>6.54) years; received therapeutic exercises only identical to those applied to the first group. Treatment was given 3 times per week, every other day, for 4 consecutive weeks. Patients were evaluated pretreatment and posttreatment for shoulder pain severity, shoulder functional disability, shoulder flexion, abduction and internal rotation motions and shoulder acromiohumeral distance in adduction and abduction using ultrasonography. Results: Patients of both groups showed significant improvement in all the measured variables. The first group showed a significant improvement than the second group in all the measured variables. Conclusion: Bothof myofascialtherapy and therapeutic exercises group and therapeutic exercises group had a significant effect on decreasing shoulder pain severity and shoulder functional disability. Also there was an increasing in shoulder flexion, abduction, internal rotation. As well as the (AHD) both in adduction and abduction .However, the combination effect of myofascial therapy and therapeutic exercises were more effective than the therapeutic exercises in allmeasured variablesinthe treatment of shoulder impingement syndrome patients.</p>		
<b>Key words</b>	1.	impingement syndrome.
	2.	myofasical release.
	3.	therapeutic exercises.
	4.	joint mobilization.
	5.	acromiohumeral distance (AHD).
<b>Arabic Title Page</b>	:	التأثير المشترك لإنفراج النسيج الليفي والتمارين العلاجية مقابل التمرينات العلاجية لعلاج متلازمة انحشار الكتف.
<b>Library register number</b>	:	3315-3316.