

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

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

**Physical Therapy Department for Neuromuscular and
Neurosurgical Disorder and Its Surgery**

Master Degree

2016

Author	:	Abdulrahman Ahmad Mohieldien Abdulfattah
Title	:	Role of intrinsic postural trunk muscles in core stability during standing to sitting in post-stroke patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Ebtessam Khattab Gad El-Mawla
	2.	Hatem Mohamed El-Azi zi
	3.	Wanees Mohamed Al-Amir
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: Postural trunk muscles play an important role in maintaining balance in post-stroke patients. Objective: To determine whether there was a change in the role of intrinsic postural muscles of the trunk (Transversus Abdominis and Lumbar Multifidus) in core stability from standing to sitting in post-stroke patients. Subjects: Two matched groups of fifteen subjects each (twelve males and three females) participated in this study, a study group of subacute post-stroke patients and a control group of healthy subjects. Methods: Standing and sitting balance was examined by Tinetti test in both groups, then, the muscle thickness of Transversus Abdominis and Lumbar Multifidus was measured using medical ultrasound imaging system (Logiq P6-Pro) during rest, voluntary contraction, standing, midway between standing and sitting. Results: The results of this study showed a significant difference in the thickness of the Transversus Abdominis and Lumbar Multifidus from standing to sitting between both sides (affected and unaffected) in the study group, and between the affected side in the study group and the non-dominant side in the control group. Also, there was a significant correlation between the Transversus Abdominis thickness on both sides in relation to the Tinetti test score in the study group. Conclusion: There was a significant change in the role of intrinsic postural muscles of the trunk (Lumbar Multifidus and Transversus Abdominis) in core stability from standing to sitting in patients post-stroke.</p>		
Key words	1.	Core stability
	2.	standing to sitting
	3.	Transversus Abdominis
	4.	Lumbar Multifidus
	5.	ultrasound imaging
	6.	balance
	7.	stroke
	8.	intrinsic postural
Classification number	:	
Pagination	:	158 P.
Arabic Title Page	:	دور عضلات القوام الداخلية في الثبات المحوري للجذع من الوقوف إلى الجلوس في مرضى السكتة الدماغية.
Library register number	:	4689-4690.

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Author	:	Ahmed Khalil Khalil Abo Elata Mousa
Title	:	Influence of Lower Limb Constraint Induced Therapy on Gait Parameters in Stroke Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou-Shady
	2.	Hala Rashad El-Habashy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: Stroke is a common CVA problem that resulting in multiple gait disorders and subsequence disturbance of different gait parameters, so this study might be a guide in managing gait problems and consequently improve walking with less exertion and maximum function. Objective: The purpose of this study was to investigate effect of Constraint Induced Therapy on Gait Parameters in Stroke patients. Methods: Thirty chronic stroke patients of both sexes had participated in this study. They were assigned randomly into two equal groups Study group (GA) and Control group (GB) with the age range from 45-60 years old. (GA) consisted of 15 patients (13 males, 2 females) received constraint induced therapy with conventional physical therapy program, (GB) consisted of 15 patients (13 males, 2 females) received only the conventional program 3 times per week every other day for 8 weeks, (24) sessions. Patients were evaluated for gait parameters pre and post treatment. Results: The result revealed that there was significant improvement in gait parameters for (GA) than that for (GB). Conclusion: Eight weeks rehabilitation program focus on lower limb constraint induced therapy with the conventional physical therapy program was more effective in improvement of gait parameters than application of conventional physical therapy only.</p>		
Key words	1.	Constraint Induced Therapy
	2.	Gait Parameters
	3.	Stroke
	4.	Lower Limb Constraint
	5.	Induced Therapy
Classification number	:	000.000.
Pagination	:	116 p.
Arabic Title Page	:	تأثير العلاج بالتقييد المستحث للطرف السفلى على قياسات المشى فى مرضى السكتة الدماغية.
Library register number	:	4745-4746.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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Author	:	Ahmed Magdy Metwally Abd Al Hamid
Title	:	Effect of Task Oriented Training on Postural Stability in Patients with Type (II) Diabetic Neuropathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou-Shady
	2.	Amira Mohamed El Gohary
	3.	Wael Salah Shendy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: Sensorimotor cortex is responsive to peripheral and central stimulation by mechanisms that are important for learning motor tasks. The purpose of this study was to investigate the effect of task oriented training on postural stability in patients with type (II) diabetic neuropathy. Methodology: Thirty diabetic neuropathic patients were assigned into two equal groups (group I and II): group (I) received task oriented training in addition to selected physical therapy program (Wobble board training, range of motion, stretching exercises and gait training) for 12 sessions every other day, each session for 1 hour, while group (II) received selected physical therapy program only for 12 sessions every other day, each session for 1 hour. Patients were assessed using Biodex stability system including postural stability test and clinical tests (berg balance scale, functional reach test, and time up and go test). Results: This study revealed that postural stability is significantly improved in both groups with the best results for group I. Conclusion: Task oriented training could be considered a valuable and non-invasive method for improving postural stability in patients with type II diabetic neuropathy.</p>		
Key words	1.	Diabetic peripheral neuropathy
	2.	Postural stability
	3.	Task oriented training
	4.	Type (II) Diabetic Neuropathy
Classification number	:	000.000.
Pagination	:	102 p.
Arabic Title Page	:	تأثير التدريب بالمهمة الموجهة على ثبات القوام في مرضى التهاب الأعصاب السكري (النوع الثاني).
Library register number	:	5213-5214.

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

Author	:	Amal Hassaniien Mohamed
Title	:	Effect of Cognitive Behavioral Therapy on Cervicogenic Headache Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou-Shady
	2.	El Gohary Mohamed El Gohary
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Objectives: The objective of this study was to investigate the effect of cognitive behavioral therapy on cervicogenic headache patients. Subjects and Methods: Thirty patients were recruited from Raa's Elteen hospital in Alexandria and physical therapy out-patient clinic Cairo University with age 25-45 years of both sexes assigned into two equal groups a study group (1) and a control (2). Group (1) received selected physical therapy program (Ultrasound, Infrared and Isometric exercises for cervical muscle) in addition to cognitive behavioral therapy, while Group (2) received the same selected physical therapy program only as group (1). The patients were assessed with surface Electromyography EMG, Visual Analogue Scale (VAS) and Headache Disability Index (HDI) before and after treatment at rate of three sessions per week for one month. Results: Showed significantly decreased in scores of EMG and VAS with improving the score of HDI post treatment in group (1) more than group (2) as compared with the base line levels pretreatment with P-value less than or equal to 0.05 considered significant and highly significant if P-value < 0.01. Conclusion: Cognitive behavioral therapy is effective and non-invasive in treatment of cervicogenic headache patients.</p>		
Key words	1.	cervicogenic headache
	2.	cognitive behavioral therapy
	3.	surface EMG
	4.	Headache
	5.	VAS
	6.	HDI
Classification number	:	000.000.
Pagination	:	87 p.
Arabic Title Page	:	تأثير العلاج السلوكي المعرفي علي مرضي الصداع العنقي الغضروفي .
Library register number	:	4923-4924.

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Author	:	Ameir Abdel Moneem <i>Mohamed</i>
Title	:	Neural gliding versus mechanical traction in patients with cervical radiculopathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abdel Raouf Abo Shady
	2.	Mahmoud Hemeda Mahmoud
	3.	Moataz Mohamed El-Semary,
Degree	:	Master.
Year	:	2016.
Abstract	:	<p>Background: Cervical Traction and Neural Mobilization (gliding) both have been individually advocated for treatment of Cervical radiculopathy due to their various effects. But the combined effect of these techniques has not been explored in studies. Hence the purpose was to evaluate the effect of application of cervical traction and neural mobilization for median and ulnar nerves on improvement in neck pain, radicular symptoms, neck disability and cervical range of motion in subjects with unilateral Cervical Radiculopathy. Methods: An experimental study design, 30 subjects with Unilateral Cervical Radiculopathy and Upper Limb Tension Test (ULTT) positive for median and ulnar nerves bias, randomized 15 subjects each into two groups- Group A and Group B respectively. Group A received mechanical Cervical Traction. While Group B received Mechanical Cervical Traction followed by neural gliding for median and ulnar nerves. The duration of intervention was given three treatment sessions per week day over day with session's time between 20 to 30 min. for six weeks. Outcome measures such as Visual Analogue Scale (VAS), Neck Disability Index (NDI) and Cervical Range Of Motion (CROM) were measured pre and post treatment. Results: Comparison of post intervention means at 6th week of treatment there is a statistically significant ($p < 0.05$) difference in improvement of outcome measures between two groups. In study group B shown greater percentage of improvement than control group A. Conclusion: The present study concludes that application of mechanical cervical traction followed by neural mobilization (gliding) is more effective in improving cervical and upper limb pain, functional disability and severity of radicular symptoms than mechanical cervical traction only for patients with Unilateral Cervical Radiculopathy.</p>
Key words	1.	Cervical Radiculopathy
	2.	Mechanical Cervical Traction
	3.	Neural Mobilization.
Classification number	:	000.000.
Pagination	:	123 p.
Arabic Title Page	:	الإنزلاق العصبي مقابل الشد الميكانيكي في مرضى إعتلال الأعصاب العنقية.
Library register number	:	5153-5154.

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Author	:	Aysha S. El Homran
Title	:	Influence of Transcranial Magnetic Stimulation in Management of Migraine Headache.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera H. Darwesh
	2.	Mohamed S. El Tamawy
	3.	Hala R. El Hapashi
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Introduction: Migraine is a common primary headache disorder with no underlying identifiable pathological cause. It affects 11% of the total adult population creating a significant socio-economic burden on society. Transcranial magnetic stimulation (TMS) is non-invasive tool, alter the excitability of the cerebral cortex, as well as of intracortical inhibitory circuits. It is a therapeutic modality that is being developed as both an acute and preventive treatment for migraine. Purpose: This study aimed to determine and investigate the effects of low-frequency rTMS over occipital lobe in the management of migraine headache. Methods: Thirty migraine patients participated in the study, their age ranged from 20-50 y. The patients were assigned into three equal groups (G1, G2&G3). Group one (G1) was treated by daily twelve low frequency (1Hz) rTMS over occipital lobe. Group two (G2) was treated by a designed physical therapy program and sham rTMS. Group three (G3) was treated by the same designed physical therapy program and rTMS. Pain intensity of headache was assessed by visual analogue scale pre, immediately post treatment and after three months of post treatment. Level of serum serotonin was measured pre and immediately post treatment. The frequency of headache attacks was assessed pre and post three months. Results: Significant improvements were observed in the three studied groups. Level of serum serotonin significantly elevated in G3 that received both TMS and a designed physical therapy program than in both G1 (TMS) and G2 (a designed physical therapy program). It was slightly elevated in G2 than G1 ($p= 0.197$). Pain intensity decreased in the three studied groups immediately post treatment and three months post treatment. The percentage of improvement was nearly similar in G1; G2 and G3. A significant decrease in frequency of attack three months post treatment in the three studied groups. It was significantly decreased in G2 than G1 and in G3 than G1 with no difference between G2 and G3. Conclusion: Low-frequency rTMS over occipital cortex is effective in improving migraine headache with no additional benefit when compared to manipulative therapy alone, in the treatment of migraine headaches in adults. Serotonin is an objective and accurate method to assess the severity of migraine headache.</p>		
Key words	1.	Repetitive transcranial magnetic stimulation (RTMS) -
	2.	Migraine headache (MH).
Classification number	:	000.000.
Pagination	:	116 p.
Arabic Title Page	:	تأثير التحفيز المغناطيسي عبر الجمجمة في علاج مرضى الصداع النصفي .
Library register number	:	4659-4660.

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Author	:	Hend Sayed Abd El-Salam
Title	:	Efficacy of Shock wave in treatment of sciatic neuralgia
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Hussien Ahmed Shaker
	2.	Waleed Talat Mansour
	3.	Gamal Salah el deen
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>The purpose of this study was to detect the effect of shock wave in treatment of sciatic neuralgia. Methods: Thirty male and female patients suffering from sciatic neuralgia due to disc bulge were assigned randomly into two equal groups. Study group (GA) (n=15) and control group (GB) (n=15). The patients in the study group (GA) received shock wave and program of therapeutic exercise, the patients in control group (GB) received the same program of therapeutic exercise. The assessment of pain intensity through visual analogue scale and balance stability through biodex stability system were measured before and after four weeks of treatment for both groups. Result: showed that there was significant decrease in pain and significant improvement in balance variables (over all stability index, medio-lateral stability and antro-post stability) in the study group. There was no significant improvement in pain and stability index in the control group. Conclusion: The shock wave was effective method in treatment of sciatic neuralgia due to disc bulge.</p>		
Key words	1.	Sciatic neuralgia
	2.	Pain
	3.	Shockwave.
	4.	Balance
Classification number	:	000.000.
Pagination	:	98 P.
Arabic Title Page	:	تأثير الموجات التصادمية في علاج حالات الام عصب النسا.
Library register number	:	5235-5236.

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Author	:	Hossam Mohammed Alsaid
Title	:	Vibrating Insole versus Biodex System on Standing Balance in Patients with Diabetic Neuropathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal A. Abo Shady
	2.	Neveen M. El-Fayoumy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>The purpose of this study was to investigate the effect of vibrating insole versus Biodex system on standing balance in patients with diabetic neuropathy. Methods; Forty five diabetic patients from both sexes with mild and moderate peripheral neuropathy participated in this study (15) patients for each group. The patients were randomly divided into three equal groups; Study group (A) received vibrating insole under both feet during standing for 30 min, every other day for 18 sessions, total duration of session (60 min). Study group (B) received visual feedback training by Biodex balance system, for 30 min, every other day for 18 sessions total duration of session (60 min). Control group (C) received selected physical therapy program only for 30 min, every other day for 18 sessions, total duration of session (30 min). All the three groups received selected physical therapy program (proprioceptive training, Ankle range of motion exercises) for 30 min (for 6 weeks every other day). The results revealed that, in group (A) There was improvement of standing balance in diabetic neuropathic patients, while, in group (B) there was significant improvement of standing balance in patients with diabetic neuropathy, and less improvement in standing balance in control group (C), there was statistical significant difference between three groups post treatment. On conclusion, visual feedback training of Biodex Balance System was more effective than vibrating insole for enhancement of standing balance in patients with diabetic neuropathy.</p>		
Key words	1.	Diabetic peripheral neuropathy
	2.	Vibrating insole
	3.	Biodex Balance System
Classification number	:	000.000.
Pagination	:	131 P.
Arabic Title Page	:	الضبان الإهتزازى مقابل جهاز الإتران على ثبات الوقوف فى مرضى التهاب العصب السكرى.
Library register number	:	4783-4784.

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Author	:	Maha Mostafa Mokhtar Ibrahim
Title	:	Effect of unilateral versus bilateral upper limb training on reaching pattern in stroke patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou Shady
	2.	Amira Mohamed El-Gohary
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Objectives: The objectives of this study were to compare the effect of bilateral versus unilateral upper extremity training on improving the reaching pattern in stroke patients. Patients and methods: forty five stroke patients were allocated into three equal groups, (GA): a control, (GB): unilateral and (GC): bilateral groups. The control group received selected physical therapy program for 20 minutes (Passive, active assisted and active free movements for the affected side, neurodevelopmental approach, postural control and balance training, functional training (ADL) and gait training), whereas, the unilateral group received the selected physical therapy program, in addition to designed unilateral upper limb training and the bilateral group received the selected physical therapy program, in addition to designed bilateral upper limb training. The treatment program for the three groups was three times per week for six weeks. In addition to physical therapy program all three groups used virtual reality training as a home routine for 30 minutes. The patients were assessed clinically with the Motor Assessment Scale, Reaching Performance Scale and Kinesiological RMS Electromyographic Activity of selected four muscles "clavicular head of pectoralis major, anterior deltoid, lateral head of triceps and extensor carpi radialis muscle" before and after six weeks of treatment. Results: Although, there was no statistical significant difference among three groups regarding the RMS of EMG activity of the four selected muscles, there was clinical increase and higher percent of improvement in favor to the bilateral training group in the motor assessment scale, reaching performance scale and RMS of EMG activity of the four selected muscles. There was significant positive correlation between RMS of EMG activity and percent of change of MAS and RPS. Conclusion: Bilateral arm training has emerged as an approach that leads to positive outcomes in addressing upper extremity paresis after stroke. So; bilateral arm training is a necessary adjunct to unilateral training to improve motor functions and reaching pattern of the upper extremity in stroke patients.</p>		
Key words	1.	Bilateral UE Training
	2.	Kinesiological EMG
	3.	Reaching Pattern
	4.	upper limb training
	5.	Virtual Reality
	6.	Stroke
Classification number	:	000.000.
Pagination	:	141 P.
Arabic Title Page	:	تأثير التدريب الأحادي مقابل الثنائي للطرف العلوي علي نمط الوصول في مرضي السكتة الدماغية.
Library register number	:	4929-4930.

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Author	:	Mahmoud El-Sayed Abd El-Kader Midan
Title	:	Changes in Pressure Trajectory during Gait in Patients with Diabetic Neuropathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mussa Ahmed
	2.	Amira Mohamed Elgohary
	3.	Bassam Abdel-Megeed El-Nassag
Degree	:	Master.
Year	:	2016.
Abstract	:	<p>Objectives: The purpose of this study was to identify the effect of diabetic polyneuropathy on center of pressure trajectory and falling risk assessed by Berg Balance Scale in diabetic patients. Subjects and methods: Thirty diabetic patients from both sexes participated in this study with age ranged between 50-60 years. The patients were divided into two equal groups; fifteen patients with mild polyneuropathy with grade IIa of Dyck classification, study group (A) and 15 patients without polyneuropathy, control group (B). All patients had nerve conduction studies, balance assessment with Berg balance scale and assessment of center of pressure trajectory during gait with pressure measuring insoles in self selected and maximum walking speed. Results: Results revealed significant decrease in Berg Balance Scale score, anteroposterior displacement and velocity during self selected speed and anteroposterior center of pressure displacement in maximum walking speed in group (A) compared to group (B). There was a significant increased in mediolateral center of pressure in maximum speed compared to self selected speed in group (B) only. In addition there were significant positive correlations between balance and mediolateral and anteroposterior center of pressure velocities during self selected speed, while there were significant positive correlations between balance and all parameters of center of pressure during maximum walking speed. In conclusion: Diabetic polyneuropathy has an effect on center of pressure trajectory as a result it increases fall risk in diabetic patients.</p>
Key words	1.	Center of pressure
	2.	Diabetic polyneuropathy
	3.	Pressure insole
	4.	Gait
Classification number	:	000.000.
Pagination	:	112 P.
Arabic Title Page	:	التغيرات في مسار مركز الضغط أثناء المشي في حالات الإعتلال العصبي الطرفي النواتج عن البول السكري.
Library register number	:	5033-5034.

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

Author	:	Mahmoud Galal Zare
Title	:	Efficacy of balance training in lumbar spondylolisthesis with radiculopathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Hussein Ahmed Abd Elrahman Shaker
	2.	Mohamed Elsayeed Elawady
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>This study was designed to compare difference between balance exercises added to traditional treatment and traditional treatment alone in treating spondylolisthesis patients. Thirty patients from both sexes diagnosed as isthmic lumbar spondylolisthesis grade two associated with low back pain and radiculopathy (as confirmed by x-ray); will be selected from Kasr EL-Aini hospital outpatient clinics (neurology and physical therapy). Their age was 30-50 years with a chief complaint of chronic low back pain. They were randomly selected. They were evaluated on the basis of medical review and an objective examination by a neurologist and physical therapist. They were divided into two groups; A and B. Data regarding the balance were collected from each subject through computerized dynamic posturography in El-Kasr Elini. Assessment included static (sway velocity of center of gravity during unilateral and double stance) and dynamic (rhythmic weight shift).The results of this study revealed significant improvement of balance in both groups with superiority of group (B) which received traditional and balance exercises using the NeuroCom Balance Master System.</p>		
Key words	1.	Balance
	2.	Lumbar spondylolisthesis
	3.	Radiculopathy
Classification number	:	000.000.
Pagination	:	123 P.
Arabic Title Page	:	تأثير استخدام الحقيقه المفتعله علي الاتزان لدي الأطفال المصابين بالفالج الشقي.
Library register number	:	4695-4696.

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

Author	:	Nesma Salah El Deen Farghaly
Title	:	Resting Head Posture in Relation to Cervical Muscle Morphology and Endurance in Chronic Mechanical Neck Pain
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Ebtessam Khattab Gad-El Mawla
	2.	Hatem Mohamed El Azizi
	3.	Aliaa Mohammed Rehan Youssef
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: Abnormalities in head posture have been associated with the development and persistence of neck pain. This in turn, could cause structural changes in the cervical muscles and impairment in the cervical muscles endurance. Thus, investigating the relation between the resting head posture and cervical muscles morphology and endurance can provide insights into mechanisms of pain chronicity. This could lead to better evaluation of neck pain and help in the development of rehabilitation programs. <i>Purpose:</i> To investigate relationship between resting head posture and cervical muscle morphology and endurance in subjects with chronic mechanical neck pain. <i>Participants:</i> Thirty subjects from both sexes were enrolled in this study. <i>Methods:</i> Neck pain, Functional disability were assessed by visual analogue scale and neck disability index. Muscle thickness was measured by ultrasonography while cervical muscles endurance was quantified by neck flexor endurance test and neck extensor endurance. Craniovertebral and gaze angles were measured by photography. <i>Results:</i> There was no significant difference between both groups in all the variables measured except for the right sternocleidomastoid muscle thickness which was significantly smaller in patients with mechanical neck pain. Also, cervical flexor endurance showed significant decrease in subjects with mechanical neck pain. There were no significant correlations found in both groups between cervical angles and other measured variables. Also no significant correlation was found between amount of pain and degree of functional disability in subjects with mechanical neck pain. <i>Conclusion:</i> Subjects with mechanical neck pain didn't show significant difference in cervical angles compared to their age- matched peers. Thus, correcting this posture in this population should not be a priority in rehabilitation. On the other hand, sternocleidomastoid muscle showed structural changes in the form of atrophy, thus incorporating early strengthening together with stretching should be recommended in rehabilitation programs.</p>		
Key words	1.	Resting head posture
	2.	Muscle morphology
	3.	Muscle endurance
	4.	Chronic Mechanical Neck Pain
Classification number	:	000.000.
Pagination	:	103 P.
Arabic Title Page	:	علاقة وضع راحة الرأس بشكل وقوة احتمال عضلات الرقبة في حالات آلام الرقبة الميكانيكي المزمن.
Library register number	:	5027-5028.

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

Author	:	Raghda Nasr Ibrahim Nassar
Title	:	Cawthorne cooksey versus habituation training in vertebro basilar insufficiency patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd El-Raouf Abou-Shady
	2.	Ayman Ismail Kamel
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: <u>Vertigo</u> is the sensation of spinning , it is the most recognizable and quite often the sole symptom of decreased blood flow in the vertebra basilar distribution. The purpose of this study was to compare between the effect of Cawthorne Cooksey versus Habituation Training on postural stability and vertigo at flow volume in vertebra basilar insufficiency patients.</p> <p>Methodology: A referred thirty vertebra basilar insufficiency patients from both sexes were assigned into two equal groups (group A and B), every group consists of 15 patients, with age ranged from (45-60) years old, diagnosed with vertebra basilar insufficiency and received training for 12 sessions every other day, each session for one hour: group (A) received Cawthorne Cooksey Training while group (B) received Habituation Training.ThePatients were assessed clinically using Biodex Stability System , Doppler Ultrasound, Berg Balance Scale , Functional Reach Test and Visual Vertigo Analogue Scale. The study was done in out clinics of Kasr Al-Ainy Hospital , faculty of physical therapy- Cairo University , and 6 October university hospital.</p> <p>Results: this study revealed that balance and vertigo were improved in both groups with the best improvement results of group (A) more than group (B).Conclusion: Cawthorne Cooksey Training could be a proper method for improving balance and vertigo in vertebrobasilar insufficiency patients.</p>		
Key words	1.	Vertigo
	2.	Habituation Training,
	3.	Balance
	4.	Cawthorne Training
	5.	basilar insufficiency
Classification number	:	000.000.
Pagination	:	103 P.
Arabic Title Page	:	تدريب كوثرن كوكسي مقابل التدريب المعتاد في مرضي قصور الشريان الفقاري القاعدي.
Library register number	:	5221-5222.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Rasha Ahmad Nazeer
Title	:	Effect of functional electric stimulation combined with task specific training on Gait In Stroke Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera Hassan Darwish
	2.	Amr Hasan El-Hasny
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Back ground: Gait impairment is one of the most common problems after stroke . Purpose : To assess the effects of functional electrical stimulation (FES) combined with task specific training on gait in stroke patients. Methods :Thirty sub acute hemiparetic patients represented the sample of the present study . Their age ranged from 40 to 58 years old. They were randomly assigned into two equal groups ; control group(G1) received a designed physiotherapy program ,and study group(G2) received the same program in addition to FES during treadmill training . The treatment program was conducted five sessions /week for six weeks . Two dimensional (2D) gait analysis was used to assess the following gait parameters ; velocity, cadence, step length, stride length, instantaneous angles of knee & ankle of the affected lower limb during (initial contact , loading response and terminal swing) sub-phases of gait cycle .And Ten meter walking time test to assess the walking speed over a short distance. Assessment were done pre and post treatment for each group. Post treatment assessment was done for G1 & G2. Results: Before starting the treatment, there was a non-significant difference in the mean values of all variables in G1&G2. The result also revealed statistically significant improvement in the measured variables of both the control and study groups when comparing their pre and post treatment mean values. After treatment program significant difference was recorded between the two groups in favor of the study group (G2). Conclusions: FES training should be considered in the rehabilitation protocols besides traditional motor training for better functional rehabilitation of hemiparetic stroke patients.</p>		
Key words	1.	Stroke
	2.	Task Specific Training
	3.	Functional Electric Stimulation Rehabilitation
	4.	Gait
Classification number	:	000.000.
Pagination	:	140 P.
Arabic Title Page	:	تأثير التحفيز الكهربائي الوظيفي والتدريب الوظيفي المحدد على المشي في مرضى السكتة الدماغية.
Library register number	:	4665-4666.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sally Samir Shater Ibrahim
Title	:	Sustained Cervical Natural Apophyseal Glides versus Dorsal Manipulation in Cervical Radiculopathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Hussein Ahmed Shaker
	2.	Abdel Rahman Talat
	3.	Wael Salah Shendy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background and Purpose: Cervical radiculopathy is a common entity. Several non-operative interventions, with varying success rates, have been described for treatment of cervical radiculopathy. But the available evidences of comparing the effectiveness of one manual therapy over the other are very few. So, the purpose of this study is to compare the effectiveness of cervical sustained natural apophyseal glides versus Thoracic Spine Manipulation in the treatment of unilateral cervical radiculopathy. Subjects: forty-five females with chronic unilateral cervical radiculopathy of age group range between 30 to 40 years were enrolled in this study. Methodology: Patients were divided into three Groups (A, B & C) with randomized sampling method, each group contain 15 patients. Group A (study group) was treated with selective physical therapy program (interferential therapy-ultrasound-ice pack) and cervical sustained natural apophyseal glides; Group B (study group) was treated with the selected physical therapy program as group A and Thoracic Spine Manipulation; Group C (control group) was treated with the selected physical therapy program only. Duration of the treatment was 4 weeks in all the three groups, Frequency: 3 sessions per week. Subjects were assessed at baseline and at the end 4th week. Five outcome measures: Visual analogue scale (VAS), neck disability index (NDI) questionnaire, cervical range of motion (CROM), Deep Cervical flexor muscles performance, and Body chart were taken for assessment and analysis. Results: A statistically significant difference between all the 3 groups over the total treatment period 4 weeks for, Visual analogue scale, cervical range of motion and Neck disability index were found with greater change scores in Group A and B. A statistically significant difference for Deep Cervical flexor muscles performance in Group A and B only. A statistically significant difference for centralization time in Group A when compared with B. Conclusion: According to the results of this study it is recommended to use cervical SNAGs and the selected physical therapy program (interferential therapy-ultrasound-ice pack) to treat patients with cervical radiculopathy, as it showed better improvement in increasing cervical extension, right and left rotation ROM and earlier centralization time when compared to Thoracic Spine Manipulation group.</p>		
Key words	1.	Cervical radiculopathy
	2.	Sustained natural apophyseal glide
	3.	High velocity
	4.	low amplitude thoracic spine manipulation
	5.	Manipulation
Classification number	:	000.000.
Pagination	:	147 P.
Arabic Title Page	:	تحريك الفقرات العنقية بطريقة موليجان مقابل تحريك يدوى للفقرات الصدرية في حالات اعتلال جذور الأعصاب العنقية.
Library register number	:	5045-5046.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
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PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sandy Nabil Hanna Abd ElMesih
Title	:	Relationship between selected functional scales and laboratory measurements of balance in stroke patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mousa Ahmed
	2.	Ebtessam Mohamed Fahmy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Objective: The purpose of this study was to examine the relationship between the selected functional scales and laboratory measurements of balance in chronic stroke patients. Subjects and methods: One hundred chronic stroke patients of both sexes with age ranged from 45-60 years and twenty age and sex matched healthy subjects participated in this study. The subjects were evaluated using functional scales (Brunel Balance Assessment (BBA), Balance Evaluation System Test (BEST), Berg Balance Scale (BBS) and laboratory Biodex Stability system (BSS) balance examination. Two trained physiotherapists evaluated the subjects and collected the data. The researcher assessed the subjects twice, at the start of the study and after one week. The investigator assessed the subjects at the start of the study only. Results: The result revealed that there was a significant strong negative correlation between the selected functional scales (BBA, BEST, and BBS) and laboratory (BSS) balance examinations. There was a high inter-rater and intra-rater reliability in the application of the selected functional scales. Conclusion: The selected functional balance scales are reliable as laboratory measurement in assessing balance in chronic stroke patients. So, they are recommended to evaluate balance in clinical practice and research.</p>		
Key words	1.	Stroke
	2.	Functional balance scales
	3.	Biodex Stability System
	4.	balance
	5.	laboratory measurements
Classification number	:	000.000.
Pagination	:	141 P.
Arabic Title Page	:	العلاقة بين بعض اختبارات الإتزان الوظيفي و القياسات الم عمليه للإتزان في مرضي السكتة الدماغيه.
Library register number	:	5165-5166.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sara Salah El Din-Abdel Megeed
Title	:	Effect of Transcranial Direct Current Stimulation on Discogenic Sciatica
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera Hassan Darwish
	2.	Samiha Hafez Hassan
	3.	Sandra Mohamed
Degree	:	Master.
Year	:	2016.
Abstract	:	<p>Sciatica is known as nerve root pain, or radiculopathy in the distribution of the lumbosacral nerves. Sciatica is caused by a herniated disc involving nerve root compression. However, lumbar canal stenosis or foraminal stenosis, tumors or cysts are other possible causes. Transcranial direct current stimulation is noninvasive technique in which a low amplitude electrical current is used to change the state of local cortical excitability to overcome sciatic pain. Purpose: This study was conducted to determine the effect of transcranial direct current stimulation on discogenic sciatic pain. Subjects: Thirty female patients complained from chronic unilateral sciatica due to lumbar disc prolapse at L4-5& L5, S1. Their ages ranged from 35 to 55 years old. The patients were assigned randomly into two equal groups, control group (G1) and study group (G2). The patients in control group (G1) received designed physical therapy program consisted of abdominal strengthening and lower back stretching exercises. The patients in the study group (G2) received the same physical therapy program as G1 in addition to transcranial direct current stimulation. The clinical assessment of discogenic sciatica consisted of assessing pain intensity through visual analogue scale (VAS), range of motion of hip flexion during straight leg raise (SLR) was measured by electrogoniometer and quality of life was assessed by Maine-Seattle Back Questionnaire (MSBQ). Pre and post assessment were done before and after eight weeks of treatment (end of treatment) for both groups. Results: It revealed significant decrease in the mean values of VAS post treatment in study group compared with control group ($p = 0.0001$). A significant increase in the mean values of ROM post treatment in study group compared with control group ($p = 0.0001$) and a significant decrease in the mean values of MSBQ post treatment in study group compared with control group ($p = 0.001$). Conclusion: It was concluded that transcranial direct current stimulation has significant effect on discogenic sciatica.</p>
Key words	1.	Discogenic sciatica
	2.	Lumbar disc prolapsed
	3.	transcranial direct current stimulation
Classification number	:	000.000.
Pagination	:	93 P.
Arabic Title Page	:	تأثير الاستثارة الكهربائية عبر الرأس على آلام عرق النسا غضروفي المنشأ .
Library register number	:	5001-5002.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR NEUROMUSCULAR AND
NEUROSURGICAL DISORDER AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Shereen Saad Eldin Mohamed Ali
Title	:	Effect of Cognitive Dysfunction on Gait in Patients with Diabetic Polyneuropathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera Hassan Darwish
	2.	Mohamed S. El- Tamawy
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: Adequate and accurate rehabilitation program of diabetic polyneuropathy (DPN) depends on a precise assessment of cognition and determining its relation on gait using different objective and valid methods. The purpose of this study was to assess cognitive function and analyze & investigate influence of cognitive dysfunction on the spatiotemporal gait parameters during three different gait conditions (walking without cognitive task, walking with verbal fluency & walking with arithmetic task) in diabetic polyneuropathy patients. Methods: Forty diabetic patients participated in this study. Twenty patients with type II DM with moderate polyneuropathy (G1) and 20 matched patients in (age, gender & education) with type II DM without polyneuropathy (G2) represented the sample of this study. Severity of DPN was assessed by neuropathy impairment score (NIS-LL), toxicity grading scales and Dyck classification scale. Different domains of cognition including attention/concentration, figural memory & reaction behavior for all the patients were assessed using computer –based Rehacom procedure. Spatiotemporal gait parameters including cadence, velocity, stride length & stride duration for all the patients were assessed using two dimension (2D) video-based motion analysis during the three different gait conditions. Results showed significant decrease in all cognitive domains in the DPN patients (G1). All spatiotemporal gait parameters were significant affected in the DPN (G1), especially during dual task performance (P<0.05). Conclusion: There is an association between cognitive dysfunction and polyneuropathy complications on diabetic patients. Spatiotemporal gait parameters are more affected in DPN patients, especially during dual-task conditions than diabetic patients without polyneuropathy. Attention/concentration, figural memory & reaction behavior are the main affected domains in diabetic polyneuropathy patients.</p>		
Key words	1.	Cognition
	2.	attention
	3.	figural memory
	4.	concentration
	5.	Gait
	6.	Diabetic Polyneuropathy
Classification number	:	000.000.
Pagination	:	152 P.
Arabic Title Page	:	تأثير الخلل المعرفي على المشي في مرضى اعتلال الأعصاب السكري.
Library register number	:	4861-4862.

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

Author	:	ShymaaAbd El-Kawy Ahmed
Title	:	Vestibular Rehabilitation Standardized Protocol Versus Cawthorne - Cooksey Exercises In Vestibular Neuritis
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Magdy Ahmed Arafa
	2.	Hossam Ahmed Ebrahim Abd El-Ghafar
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: The vestibular rehabilitation approach is based upon the concept that functional restoration requires a systematic reintegration of the multiple sensory modalities involved in balance in an appropriate order (and time frame) to improve outcomes. The purpose: of the current study is to compare between standardized vestibular rehabilitation protocol and cawthorne - cooksey exercises in treatment of vestibular neuritis. Methodology: forty patients suffering from vestibular neuritis, with age ranged from 30 to 55 years old participated in this study. All patients answered a questionnaire about quality of life, the Dizziness Handicap Inventory (DHI) and slow phase velocity (SPV) of nystagmus detected by head shaking nystagmus test using videonystagmography before and after vestibular rehabilitation VR, so it was possible to observe the improvement of patients after treatment. Patients were assigned randomly into two equal groups. Group (A), received Vestibular Rehabilitation Standardized Protocol. Group (B) received Cawthorne - Cooksey exercises. The level of limitation and if there is disability is assessed by Dizziness Handicap Inventory (DHI), before and after VR (after 2 weeks and after 4 weeks) and slow phase velocity (SPV) of nystagmus detected by head shaking nystagmus test using videonystagmography as a diagnostic method for selection and after two weeks of treatment then four weeks of treatment as follow up. Treatment was applied four weeks with follow up after two weeks distributed as three sessions weekly. The results: there was a significant improvement in group (A) and group (B) post treatment than pre treatment and the both groups improved equally in same range and there was no significant difference in the post treatment values of (DHI) scale and slow phase velocity of nystagmus between both groups. Conclusion: Both Vestibular Rehabilitation Standardized Protocol and Cawthorne - Cooksey Exercises are effective for treating patients with vestibular neuritis each program has good improvement post treatment than pretreatment and both have same effect, so I'd prefer Cawthorne - Cooksey Exercises to decrease effort and time consuming of exercise for patient and therapist .</p>		
Key words	1.	Vestibular Rehabilitation Standardized Protocol
	2.	Cawthorne Cooksey Exercises
	3.	vestibular neuritis
	4.	videonystagmography
Classification number	:	000.000.
Pagination	:	
Arabic Title Page	:	مقارنة بين البروتوكول المعياري لتأهيل الاتزان وبين تمارين الكاوثورن كوكسي في التهاب عصب الأتزان.
Library register number	:	4857-4858.

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

Author	:	Yasmeen Mourad El-Sayed Mourad
Title	:	Relationship Between Cognitive Impairment And Balance In Stroke Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abo Shady
	2.	Heba T'Allah Raafat Mohamed Rashad
Degree	:	Master.
Year	:	2016.
Abstract	:	
<p>Background: One third of stroke patients complained of cognitive deficits which impede recovery. The aim of this study was to investigate if the cognitive impairment affects balance in stroke patients. Methods: Thirty stroke patients were selected for this study; the patients were selected in one group. Their ages ranged from 40 to 60 years and the duration of illness ranged from 6 to 18 months. Cognitive functions were evaluated using RehaCom system that assess attention and memory while Mini Mental State Examination (MMSE) assess cognition, while balance was evaluated by using Biodex balance system and Berg Balance Scale (BBS) for each patient. The results of study revealed that patients who had highly cognitive impairment suffered from balance disabilities which vary in degree according to the severity of cognitive impairment, beside, cognitive impairment associated with right hemispheric vascular accident are more devastating than that associated with left hemispheric accident. Consequently, patients with right CVA suffered more functional decline. Conclusion: cognitive impairment in stroke patients affects the balance.</p>		
Key words	1.	Stroke
	2.	Balance
	3.	BBS MMSE
	4.	Rehacom
	5.	Biodex Balance
	6.	Cognitive Impairment
Classification number	:	000.000.
Pagination	:	94 P.
Arabic Title Page	:	العلاقة بين الخلل المعرفي و الاتزان في مرضي السكتة الدماغية .
Library register number	:	4921-4922.