

**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
2018

Author	:	Abeer Abdelmoghney Mohamed Mohamed.
Title	:	Effect of cognitive training on gait in multiple sclerosis patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Abeer Abo baker Elwishy.
	2.	Asmaa Mohamed Ebrahim.
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Background: multiple sclerosis is one of demyelinating degenerative diseases which affect the central nervous system in different areas. Gait dysfunction and cognitive impairment were recognized as the most disturbing symptoms, however their influence on each other and linking it to achieve better rehabilitative outcome is rarely studied. Purpose: to evaluate the effect of cognitive training on gait in multiple sclerosis patients. Subjects and Methods: This randomized controlled study included thirty patients diagnosed of Remitting and Relapsing Multiple Sclerosis. Their age ranged from twenty to fifty years. They were selected from MS unit in Kasr Al-Ainy hospital. They underwent baseline assessment including, gait (endurance and speed) and cognition. 2-Minute Walk, 10-Meter Walk, attention and concentration and logical reasoning were the clinical tests used to assess gait and cognition respectively. Then, they were divided into two groups; each group consisted of fifteen patients. The control group practiced a program of physical therapy only, while the study group practiced cognitive training program with physical therapy. Both groups had training for three times per week for period extended for eight weeks. Results: Statistical analysis using 2x2 mixed design MANOVA indicated significant improvement in primary outcome measures of gait endurance in the study group; 2-Min Walk test 'm' ($p=,000$) while in control group was insignificant ($p=0,383$). Significant improvement in 10 Meter Walk test 'sec' was detected in both groups as ($p=,000$). Regarding secondary outcome measures of cognition, there was significant improvement according to the level of difficulty in attention and concentration scores 'grades' in study and control group ($p=,000$) ($p=,004$) respectively. While logical reasoning scores 'grades' were insignificant in control group ($p=1,00$) and significant in study group ($p=0,00$). Conclusion: cognitive training had a positive effect on gait in multiple sclerosis patients.</p>		
Key words	1.	Multiple Sclerosis.
	2.	Rehacom.
	3.	Cognitive training on gait.
	4.	gait in multiple sclerosis patients
	5.	Cognitive rehabilitation
Classification number	:	000.000.
Pagination	:	118 p.
Arabic Title Page	:	تأثير التدريب المعرفي على المشي ف مرضى التصلب المتعدد
Library register number	:	6201-6202.

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Author	:	Adham Ali Fouad Seri Mohamed
Title	:	Combined Cervical Headache Snag With Cervical Snag Half Rotation Techniques On Cervicogenic Headache Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Wael Salah Shendy
	2.	Moataz Mohamed EL Semary
	3.	Husam Salah Mourad
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Objectives: To determine the effect of C1-C2 Mulligan SNAGs Mobilizations on Cervicogenic headache and associated dizziness symptoms. Methods: Forty eight patients with cervicogenic headache included in the study; from outpatient clinic of Faculty of Physical Therapy, Cairo University & New Cairo outpatient clinics, were randomly assigned into three equal groups; group A (Headache SNAG), group B (C1-C2 SNAG rotation) and group C (combined). Their mean age was (29.37±2.6), (29.31±2.54) & (29.68±2.65). Neck Disability Index used to examine neck pain intensity & CEH symptoms. 6 Items Headache Impact test "6-HIT" scale used to examine headache severity and its adverse effects on social life & functions. Flexion-Rotation Test "FRT" also used to assess rotation ROM at level of C1-C2 by "CROM" device. Dizziness Handicap Inventory "DHI" scale was used to evaluate dizziness symptoms. Evaluation done pre & post treatment and comparison between groups were quantified. Correlations between the examined parameters were also measured. Headache SNAG and C1-C2 Rotation SNAGs were done separately in group (A- B) and combined in group C as a treatment intervention. Results: Group C has Significant improvement in whole parameters compared to group A & B, positive correlation were found between NDI and 6-HIT scores compared to negative correlation between NDI and DHI scores. Conclusion: SNAGs mobilizations used in the study were effective in reducing cervicogenic headache & dizziness symptoms with all groups with noticeable improvement in the combined group.</p>
Key words	1.	Cervicogenic headache.
	2.	cervical dizziness.
	3.	SNAGs.
Classification number	:	000.000.
Pagination	:	95 p.
Arabic Title Page	:	استخدام تقنية التحريك النتو زي الطبيعي المستديم للفقرة الثانية العنقية مع تقنية التحريك النتوني الطبيعي المستديم النصف دوراني للفقرة الاولى والثانية العنقية وتأثيرهم على مرضي الصداع العنقي
Library register number	:	5791-5792.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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Author	:	Ahmed Anwar Mohamed Elzalabany.
Title	:	Mirror Neuron Applications on Motor Recovery in Stroke and Multiple Sclerosis: A Systematic Review.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mousa Ahmed.
	2.	Galal Abd El Wahab.
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Objectives: To summarize the best evidence of the effectiveness of mirror neuron applications for improving motor function, self-care activities, spasticity, pain, visuospatial neglect, sensation, and quality of life in the stroke and Multiple Sclerosis patients. Methods: Intensive search was done in electronic databases: PubMed, Cochrane Library, and PEDro, and reference lists. This search was done to include RCTs that compare mirror neuron applications with conventional physical or occupational therapy for patients after stroke or Multiple Sclerosis. Then, the methodological quality of each included trial was assessed, and the data was extracted. Finally, the results were analyzed by pooling the data of change scores between pre- and post-intervention through calculation of the overall standardized mean differences with 95% confidence interval. Results: Forty-four studies were included. All of them were about stroke, and no study about Multiple Sclerosis met the inclusion criteria. Of all the studies, four interventions based on mirror neurons were studied (Mirror Therapy, Mental Practice, Action Observation Therapy and Virtual Reality Reflection Therapy). Firstly, Mirror Therapy may have a significant effect on motor function of the upper extremity, and it may improve visuospatial neglect as well. There were limited evidences for improving walking ability, self-care activities, spasticity, pain, sensation, and quality of life. Secondly, Mental Practice showed a significant improvement on the motor function specially for the lower extremity, but it didn't show an evidence for improving activities of self-care activities. Thirdly, Action Observation Therapy showed a limited evidence in improving motor function of the upper extremity, walking ability or self-care activities. Finally, only one study that used Virtual Reality Reflection Therapy in stroke rehabilitation was included, so it wasn't included in the meta-analysis. Conclusion: There is an evidence from the included RCTs on the effectiveness of mirror neuron applications on improving motor function in people after stroke.</p>		
Key words	1.	Action Observation.
	2.	Motor Recovery.
	3.	Multiple Sclerosis.
	4.	RCT.
	5.	Mental Practice.
	6.	Mirror Neurons.
	7.	Mirror Therapy.
	8.	Virtual Reality Reflection Therapy.
	9.	Systematic Review.
	10.	Stroke.
Classification number	:	000.000.
Pagination	:	175 p.
Arabic Title Page	:	تطبيقات الخلايا العصبية المرآتية لاستعادة الوظائف الحركية لدى مرضى السكتة الدماغية و التصلب المتعدد : مراجعة منهجية.
Library register number	:	6137-6138.

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Author	:	Ayat Gamal El-Deen Saied Abd El-Gayed.
Title	:	Effect Of Motor Imagery Training On Reaching In Hemiplegic Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Eman Samir M. Fayez
	2.	MagdyKhalafMassoud
	3.	Islam M. Abd Allah Al-Azab
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Stroke is one of the most well-known reasons of physical disability around the world, about 80% of individuals who have had a stroke have some level of difficulty moving one side, or suffer from weakness on one side of their bodies. Mental imagery is a technique by which physical performances can be cognitively rehearsed in a safe, repetitive manner. It has been applied to stroke patients in a rehabilitation program to promote upper-extremity motor function and to overcome the case of neglect. The use of the mental imagery technique in the relearning of everyday task performance has not been widely recognized. The aim of this study was to determine the effect of motor imagery training on reaching performance in hemiplegic patients. Methods: Thirty hemiplegic patients from both sexes participated in this study and randomly divided into two equal groups; the control group (A), received selected physical therapy program only and the study group (B), received the same program in addition to motor imagery training (MIT). The physical therapy program was conducted three times per week, for one month. Both groups were evaluated before and after therapy by proximal upper extremity subscales of Fugl Meyer Assessment (FMA-UL) and by 2-dimensional analysis of Kinovea software to determine shoulder and trunk flexion angles, area between the trunk, shoulder and wrist, average angular velocity and maximum horizontal distance patient can reach. The results: the result of this study showed that there was a significant improvement ($P < 0.05$) in FMA-UL score, shoulder flexion angle, area between the trunk, shoulder and wrist, average angular velocity and maximum horizontal distance in the study group (B) when compared with the control group (A) Conclusion: Motor imagery training has a positive effect on “reaching performance” in hemiplegic patients.</p>
Key words	1.	hemiplegia
	2.	reaching
	3.	upper extremity
	4.	Fugl Meyer
	5.	FMA-UE
	6.	motor imagery training
	7.	MIT
	8.	2-dimensional analysis
	9.	Kinovea.
Classification number	:	000.000.
Pagination	:	p.
Arabic Title Page	:	تأثير التدريب التخيلي الحركي على أنموذج الوصول في مرضى الشلل النصفي.
Library register number	:	5823-5824.

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Author	:	Fatma Ibrahim Abdelsalam
Title	:	Core muscle training versus sciatic neural mobilization in post lumbar laminectomy syndrome
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Hussein Ahmed Shaker
	2.	Waleed Talat Mansour
	3.	Ashraf Anas Zytoon
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>The purpose of this study was to detect the effect of core muscle stability and neural mobilization in post laminectomy syndrome. Methods; forty five patients with post laminectomy syndrome were randomly assigned into three equal groups. Study groups (GA), (GB) and control group(GC) .The patients in (GA) received core muscle stability and selected physical therapy, and in (GB) received neural mobilization for sciatic nerve and the same selected physical therapy, while patients in control group (GC) received only selected physical therapy. The assessment include pain intensity by Numerical Pain Rating Scale, muscle cross section area by Ultrasonography, and lumbar ROM by Digital Inclinator and were evaluated pre and post four weeks of treatment for all groups.Results: showed that there were significant improvement in cross section area and thus segmental control and also improvement in pain intensity in study groups only with only clinical improvement in ROM in three groups.Conclusion: the core muscle stability was effective in post laminectomy syndrome.</p>		
Key words	1.	core muscle stability,
	2.	post laminectomy syndrome
	3.	neural mobilization
	4.	sciatic neural mobilization.
Classification number	:	000.000.
Pagination	:	105 p.
Arabic Title Page	:	تمارين الثبات المركزي مقارنه بتحريك عصب النسا على مرضي استئصال الصفيحه القطنيه.
Library register number	:	5749-5750.

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Author	:	Fatma Said Zidan Hamed
Title	:	Effects of Inclined Treadmill Training on Gait and Balance in Stroke Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mousa Ahmed
	2.	Ebtesam Mohamed Fahmy
	3.	Khaled Mohamed Assem
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Stroke is the most leading cause to functional disability and gait problems. Objectives: The purpose of this study was to investigate the effect of inclined treadmill training on improving balance and selected kinematic parameters of gait in chronic stroke patients. Methods: Thirty male stroke patients participated in this study. Patients were assigned randomly into two equal groups (study and control groups). The study group received treadmill training with 10% of inclination in addition to a selected physical therapy program for stroke patients (strengthening exercises, proprioceptive neuromuscular facilitation (PNF) technique and stretching exercises). The control group received treadmill training without inclination in addition to the same selected physical therapy program. Results: There was a statistically significant improvement in balance, gait speed and step length of both lower limbs post training in the study group. There was a statistically significant decrease in temporal asymmetry (increase in time on paretic leg and decrease time on non-paretic leg) on both groups. There was no statistical difference between both groups in step length of both lower limbs and time on paretic and non-paretic feet. Conclusion: Inclined treadmill training is effective in improving balance and selected gait kinematics in chronic stroke patients when added to the rehabilitation program.</p>
Key words	1.	Stroke.
	2.	Gait.
	3.	Inclined treadmill
	4.	Balance.
	5.	Treadmill Training on Gait and Balance
	6.	Treadmill Training on Balance
Classification number	:	000.000.
Pagination	:	98 p.
Arabic Title Page	:	تأثير التدريب بجهاز المشي المائل علي المشي و التوازن في مرضي السكتة الدماغية.
Library register number	:	5953-5954.

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Author	:	Heba Allah Ahmed Mohamed Abdelrahman Elnashar.
Title	:	Effect of Core Muscle Training on Upper Limb Function in Hemiparetic Patients: A Randomized Controlled Study.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Abeer Abo Bakr Elwishy
	2.	Hanan Helmy Mohamed
	3.	Rasha Mohamed ElRewainy
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Upper limb paresis is a common problem in patients with stroke. Although it is known that trunk control is an integral part of shoulder stability, the effect of core muscle training program on upper limb function is not well established till now. Purpose: To determine the effect of core muscle training on upper limb function and trunk balance in hemiparetic patients. Subjects: 30 patients with hemiparesis, with mean age 56.9 ± 7.24 years with mean duration of illness 2.66 ± 1.34 years. They assigned into two equal groups method of allocation was concealed in sequentially numbered, sealed envelopes, the control group GA: 15 patients received only conventional physical therapy program (stretching for shoulder muscles, active resisted exercises for shoulder and trunk control exercises), the study group GB: 15 patients received conventional physical therapy program and additional core muscle training. Patients received 18 sessions for 6 weeks, three sessions /week. Methods: The upper limb function was assessed using Wolf motor function test with subscales (function ability scale, time and grip strength), the range of motion of shoulder flexion and abduction was measured by using goniometer, trunk balance was assessed using the trunk impairment scale subscales (static sitting balance, dynamic sitting balance and coordination). All the measurement outcomes were assessed before the treatment and after applying the treatment program immediately. Results: There was no statistical significant difference between two groups in pretreatment assessment using wolf motor function test, trunk impairment scale and shoulder range of motion. In post treatment assessment there was no statistical significant difference between group GA and GB in all the outcome measures, except for trunk impairment scale subscale (dynamic sitting balance) the statistical significant difference was in favor to GB and not GA. Conclusion: Core muscle training is similar to conventional physical therapy program in improving upper limb function in hemiparetic patients, but it has beneficial effect on improving trunk balance.</p>
Key words	1.	Hemiparesis.
	2.	Core Muscle Training.
	3.	Upper Limb Function.
	4.	Randomized Controlled Study.
Classification number	:	000.000.
Pagination	:	118 p.
Arabic Title Page	:	تأثير تدريب العضلات الأساسية علي وظيفة الطرف العلوي لمرضى الشلل النصفي.
Library register number	:	5987-5988.

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Author	:	Ibrahim Ahmed Ibrahim Abu Ella.
Title	:	Correlation Of Malalignment Of Head Posture And Proprioception Function In Patients With Cervical Spondylosis.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera H. Darwish
	2.	Amr Hassan
	3.	Heba A.Khalifa
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Background: Cervical spondylosis and forward head posture are the most common musculoskeletal problems among the society. Proprioception errors may contribute to the development of cervical spondylosis. Objective: The study aimed to determine the relationship between forward head posture and proprioception function in patients with cervical spondylosis, and to detect the influence of cervical spondylosis severity on FHP and proprioception function. Patients and Methods: Sixty patients with cervical spondylosis from both sex represented the sample of the study. Their age ranged from 30-50 years old. Patients were divided into three equal groups according to the degree of cervical spondylosis severity; Mild group (GI), moderate group (GII) and severe group (GIII). Cervical degenerative index was used to determine the degree of spondylosis severity. Lateral photography was used to measure craniovertebral angle (CVA) from sagittal plane. Cervical range of motion device was used to assess proprioception error in six directions, flexion, extension, side bending right and left, rotation right and left. Results: There was a negative correlation between CVA and proprioception errors. A statistical significant difference in the median values of CVA and proprioception errors were found between the three groups ($P<0.05$) with proprioception error was significantly higher in (GII) and (GIII) than (GI) and the CVA was significantly lower in (GIII) than other groups. Conclusion: Forward head posture was associated with reduced proprioception. Progression of cervical spondylosis was concomitant with reduced CVA and proprioception error.</p>		
Key words	1.	Cervical spondylosis.
	2.	Forward head posture.
	3.	Proprioception function
	4.	CROM.
	5.	Lateral photography.
Classification number	:	000.000.
Pagination	:	80 p.
Arabic Title Page	:	العلاقة بين الوضع الخاطئ للرقبة ووظيفة المستقبلات الحسية فى مرضى خشونة الرقبة.
Library register number	:	5865-5866.

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Author	:	Maged Moris Beshay Rezk.
Title	:	Aquatic Versus Land Based Dual Task Training on Postural Stability in Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	NawalAbd El- RaoufAbou-Shady
	2.	Tamer Emara
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Background: For activity of daily living, person should be able to maintain and adopt various postures, react to external disturbances and use automatic postural responses. After stroke some or all of these tasks become difficult. Daily living requires balance and walking ability while performing other tasks. Purpose: To investigate the difference between the effect of aquatic dual task training and land based dual task training for improving postural stability in stroke patients. Methods: thirty male stroke patients referred medically, ages ranged from 45:60 years old, were assigned into two equal groups (Group A and B): group A received land based dual task training while group B received aquatic dual task training. The duration of treatment was four weeks, three times weekly, day after day forty minutes per session and two weeks as a follow up. Patients were assessed using Biodex balance system (bilateral postural stability test) and clinical tests (timed up and go, functional reach test). Results: Within group comparison, each group showed a significant improvement of measured variables with greater improvement in all variables in favor of group B. Between group comparison, there was a significant difference in timed up and go test and functional reach test, however, there was no significant difference in stability index between groups. Conclusion: The use of Aquatic dual task training, and based dual task training can effectively improve postural stability in stroke patients. It appears to be that aquatic training offered a greater improvement of postural stability in stroke patients.</p>		
Key words	1.	Aquatic Dual Task Training
	2.	Land Based Dual Task Training
	3.	Postural Stability-
	4.	Stroke
Classification number	:	000.000.
Pagination	:	82 p.
Arabic Title Page	:	التدريب المائي مقابل الأرضي مزدوجي المهمة على اتزان القوام في مرضى السكتة الدماغية.
Library register number	:	5909-5910.

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Author	:	Mahmoud Mohamed Aly Hassan
Title	:	Efficacy of Changing Decompression Angle on Cervical Radiculopathy Versus Stretching Protocol
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Samaha Hafez Hassan
	2.	Salam Mohamed Elhafez
	3.	Hala Rashad Elhabashy
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Cervical traction has long been defined as a distracting force that separate the cervical segments and relieve of nerve roots compression. Yet, there is lack of knowledge that reports the effects of different traction decompression angles and determines the proper angle of pull among different angles of decompression system. Purpose: The purpose of the study was to investigate the effect of different angles of decompression and comparing them with neck muscles stretching on flexor carpi radialis (FCR) H-reflex, neck disability index (NDI), and pain level in patients with cervical radiculopathy. Methods: Fifty-eight patients with cervical radiculopathy caused by cervical paramedian disc protrusion at C5-C6 or C6-C7 levels participated in the study. Their mean \pm SD age, body mass, and height were 35.05 ± 7.43 years, 72.84 ± 12.14 kg and 169.32 ± 10.35 cm respectively. They were randomly assigned into four groups; Group (A) received stretching protocols to the cervical musculature at the side of symptoms. Group (B) was treated with traction therapy from neutral position with rope angle (0°). Group (C) was treated with traction therapy from (30°) lateral bending toward the opposite side of radiculopathy. Group (D) was treated by traction from (15°) flexion with lateral bending (30°) to the opposite side of radiculopathy and (15°) rotation toward the same side of radiculopathy. All patients underwent initial pre-treatment and post-treatment measurements (after 6 weeks) of FCR H-reflex, VAS pain score, and NDI score. Findings: Mixed design MANOVA revealed that the H-Reflex increased significantly ($p < 0.05$) after treatment in Group (A), (B) and (D). However, the H-reflex post-treatment values increased non-significantly ($p > 0.05$) in patients within group (C). The NDI and VAS pain scores decreased significantly after treatment in all tested groups. There were non-significant differences in VAS, NDI, or H-reflex between the traction decompression groups (B), (C), (D) and the stretching group (A). Interpretation: Decompression traction from retracted neutral position with (0°) rope angle and foraminal opening directions either uniaxial or multiaxial is as effective as stretching of the ipsilateral neck muscles in enhancing nerve roots decompression and reducing pain in patients with cervical radiculopathy.</p>
Key words	1.	Cervical radiculopathy
	2.	Traction decompression
	3.	Stretching
	4.	Decompression Angle on Cervical Radiculopathy.
Classification number	:	000.000.
Pagination	:	p.
Arabic Title Page	:	تأثير تغيير زاوية الشد في نظام إزالة ضغوط الفقرات على التسميع المصاحب للانزلاق الغضروفي العنقي بالمقارنة ببرنامج إطالة العضلات
Library register number	:	5995-5996.

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Author	:	Mohamed Helay elMarzouk Helayel
Title	:	Effect of pelvic control exercises on gait in stroke patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera Hassan Darwish
	2.	Mohamed Soliman El Tamawy
	3.	Heba Ahmed Metwally
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Patients and Methods: Thirty male ischemic stroke patients represented the sample of the study. Their age ranged from 45 to 60 years. The Patients were assigned into two equal groups; control group (GI) treated by selected physical therapy program, and study group (GII) treated by the same program in addition to pelvic control exercises for 40-45 minutes, three sessions per week for six weeks. The spatiotemporal gait parameters were assessed pre and post treatment by Biodex gait trainer 2™ system. Sagittal pelvic tilt angles were measured by Palmation meter (PALM) inclinometer from standing position. Results: Post treatment there were a significant improvement in all measured variables except the average step length of the non-affected side in both groups. Comparison between both groups revealed a significant decrease of the anterior pelvic tilting angles on both sides, the average step length of the affected side and the percent of time spent on the non-affected foot with significant increase of the percent of time spent on the affected foot in favor to (GII) ($P < 0.05$). No significant difference of the average walking speed was detected between both groups. Improvement in pelvic tilt angle on the affected side correlates negatively with the average walking speed, time spent on the affected foot and positively with average step length on the affected side ($P < 0.05$). Improvement in pelvic tilt angle on the non-affected side correlates positively with the time spent on the non-affected foot. Conclusion: Pelvic control exercises have a positive effect on the pelvic asymmetry and consequently on gait performance in stroke patients</p>		
Key words	1.	Pelvic control exercises.
	2.	PALM.
	3.	Pelvic tilt angle
	4.	Biodex Gait trainer.
	5.	Stroke.
Classification number	:	000.000.
Pagination	:	107 p.
Arabic Title Page	:	تأثير تمارين التحكم في الحوض على المشي في مرضى السكتة الدماغية.
Library register number	:	5795-5796.

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

Author	:	Mohammad Ismaeel Al-Shurman
Title	:	Effect of Balance Training on Postural Instability in Post Infected Polyneuropathy
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abdelraouf Abo Shady
	2.	Hussam Salah Morad
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Subject and methods: Thirty Post Infectious Polyneuropathy patients (7 females and 23 males). Age ranged from 21-33 years; in sub-acute and chronic stage were participated in the study. Patients were randomly divided to two equal groups, fifteen patients each. Patients attended three sessions per week in total eight weeks, both groups received selected designed of physical therapy program (Mid passive range of motion exercises, Respiratory exercises, Manual muscles strengthening, Proprioceptive neuromuscular facilitation.) plus balance training program using balance biodex system in group A only. All patients were assessed using Biodex Balance system and manual muscle testing pre and post treatment program. Results: The statistic of results showed there were significant differences in the same both groups pre and post treatment ($P < 0.05$), and was no significant differences compare between both groups (A&B) ($P > 0.05$); clinically group A percentage improvement in balance was higher than group B. Conclusion: Balance training proved to beneficial clinically improving postural stability in post infectious polyneuropathy to prevent guest falling.</p>		
Key words	1.	Post Infectious Polyneuropathy.
	2.	Biodex balance system (BBS).
	3.	Balance
	4.	Postural Instability.
Classification number	:	000.000.
Pagination	:	82 p.
Arabic Title Page	:	تأثير تدريبات الاتزان على عدم ثبات القوام بعد عدوى اعتلال الأعصاب الطرفية.
Library register number	:	5755-5756.

**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	:	Mohammed Ahmed Zaki Iraky.
Title	:	Effect Of Transcranial Magnetic Stimulation On Unilateral Visuospatial Neglect In Stroke Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Moshera Hassan Darwish
	2.	Mohamed Soliman El Tamawy
	3.	Mye A. Basheer
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Visuospatial neglect is a debilitating, attentional disorder that affects approximately 40–81% of patients after stroke. It interferes with the rehabilitative process and is associated with a poor functional outcome. The aim of this study was to assess the influence of repetitive transcranial magnetic stimulation on visuospatial neglect in patients with acute stroke .</p> <p>Methods: Thirty ischemic stroke patients from both sexes represented the sample of the study. Their age ranged from 45 to 65 years. The patients were assigned into two equal groups of fifteen patients each; control group (GI) and study group (GII).Both groups were matched in age ,sex and mean values of all variables. The control group treated by a designed physical therapy program and the study group treated by the same program in addition to low frequency repetitive magnetic stimulation over the posterior parietal cortex (PPC). The treatment was conducted three times per week, for two weeks. Line bisection, Bell cancellation and Clock drawing tests were used for assessment of visuospatial neglect. Barthel index was used for assessment of functional activities pre and post treatment for both groups. The results: A significant improvement in scores of Line bisection and Bell cancellation tests in both groups with more favorable effect in GII ($p<0.05$) and a significant improvement in scores of Clock drawing test and Barthel index scale in both groups with a non-significant difference between them.</p> <p>Conclusion: repetitive transcranial magnetic stimulation has a positive effect in improving visuospatial neglect in patients with stroke.</p>
Key words	1.	Repetitive transcranial magnetic stimulation.
	2.	Stroke.
	3.	Bell cancellation test.
	4.	Clock drawing test.
	5.	Barthel index.
	6.	visuospatial neglect
	7.	Line bisection test.
Classification number	:	000.000.
Pagination	:	116 p.
Arabic Title Page	:	صحة ودقة الليزر جونيومتر في قياس المدي الحركي في الأشخاص الأصحاء.
Library register number	:	5819-5820.

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

Author	:	Mohammed Ramadan Ibrahim Mohammed.
Title	:	Effect of Dexamethasone iontophoresis on Acute Bell's Palsy Patients.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Mohamed Nabil EL Bahrawy
	2.	Waleed Talat Mansour
	3.	Hanan Hosney Abd EL Aleem,
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p><u>Background:</u> Bell's palsy is an idiopathic lower motor neurone lesion of the facial nerve. It is the most common cause of rapid-onset unilateral facial weakness. It often manifests rapidly. <u>Purpose of this study:</u> to investigate the effect of Dexamethasone Iontophoresis in acute stage of Bell's palsy. <u>Subjects and methods:</u> Thirty Patients of both sexes (15 males and 15 females) aged from (20-40) years old Participated in this study recruited from neurology outpatient clinic of Faculty of Physical Therapy, Cairo University. Patients were classified into two equal groups. Group (A) received oral systemic steroids and a placebo effect of iontophoresis while Group (B) received the same oral drugs and Dexamethasone Iontophoresis. Parameters were 0.5mA/cm² applied at the negative electrode (cathode), a current of 2mA was delivered using an electrode of 6cm², 4mg/mL aqueous solution of dexamethasone at the negative pole, for 20 minutes for two weeks period. Patients were assessed using Electrical Response Grading and the Yanagihara Grading Scale (YGS). Assessment was done twice for every patient (pre and post treatment). <u>Results:</u> The study revealed that there was statistical significant difference in Regarding electrical response grading and yanagihara grading scale scores in the mean values of scores between group A and group B (P = 0.001) after treatment, with the best results for group B. <u>Conclusion:</u> Dexamethasone iontophoresis was effective in treatment of acute Bell's palsy.</p>		
Key words	1.	Dexamethasone.
	2.	Bell's Palsy
	3.	Iontophoresis - Bell's Palsy
Classification number	:	000.000.
Pagination	:	100 p.
Arabic Title Page	:	تسجيل مرضى الشلل الدماغي في محافظة المنيا - مصر
Library register number	:	6045-6046.

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

Author	:	Nada M. Waziry.
Title	:	Assessment Of Hand Grip Strength Using Modified Sphygmomanometer Versus Dynamometer In Stroke Patients
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nawal Abd el-raouf Abou-Shady
	2.	Tamer H. Emara
	3.	Ibrahim Mohamed Hamoda
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Background : Grip strength is an important indicator of an individual's hand function and is tested in different hand and wrist disorders and even in other conditions that grossly affect the strength of the muscles. One of the disabilities that greatly affects grip strength is stroke. Stroke is a sudden loss of neurologic functions caused by an interruption of the blood flow to the brain. It is the leading cause of disability with residual neurologic deficits that persistently impair functions. Different tools in grip strength testing can be used such as hand dynamometer and alternatively, a modified sphygmomanometer. Objective: This study was conducted to compare between modified sphygmomanometer with hand dynamometer in grip strength measurement among post- stroke patients. Methodology: Thirty individuals with post- stroke in chronic phase of both genders, aged 45 to 60 were included in the study. Pearson correlation coefficient test was used to analyze the data. Results: revealed that both hand-held dynamometer and modified sphygmomanometer have a positive moderate significant correlation between mean values of measuring hand grip strength of post- stroke(P=0.001). Conclusion: Either of the two instruments can be used to assess the baseline and post-treatment measure for hand grip in post stroke. However, the results can be interpolated for The Modified Sphygmomanometer Test (MST) also provides objective and adequate measures at low-cost with safety and noninvasive.</p>		
Key words	1.	Assessment.
	2.	hand grip strength.
	3.	hand function.
	4.	Stroke.
	5.	Modified Sphygmomanometer.
	6.	Dynamometer.
	7.	muscle strength.
Classification number	:	000.000.
Pagination	:	74 p.
Arabic Title Page	:	قياس قوة قبضة اليد بجهاز ضغط الدم المعدل مقابل جهاز الديناموميتر في مرضي السكتة الدماغية.
Library register number	:	5875-5876.

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

Author	:	Nermin Abd El Aziz Fathy.
Title	:	Effectiveness Of Computer Based Cognitive Training On Patients With Parkinson's Disease.
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mousa Ahmed
	2.	Hanan Abdallah Amer
	3.	Walaa Mohammed Ragab
Degree	:	Master.
Year	:	2018.
Abstract	:	
<p>Background and purpose: Parkinson disease is a common neurodegenerative disorder which may have veiled cognitive impairment symptoms even in its early stages. Aim: assess the effectiveness of cognitive rehabilitation using computer assisted cognitive training using Rehacom device. Design: pre- post clinical trial. Participants and methodology: thirty- eight male idiopathic Parkinson patients having mild cognitive impairment with (clinical dementia rating scale 0.5-1 and Montreal cognitive assessment scale <26 scores and modified Hoehn and Yahr staging not more than 2) divided randomly into a control group n=16 and a study group n=15. A supervised six weeks Rehacom cognitive training program for attention and concentration and figural memory modules were given to the study group, the training was conducted two times per week. the control group received no cognitive training, both groups were assessed at the beginning and the end of six weeks of training by Rehacom device. Results: there were statistical significant improvement of the mean values of all attention and concentration and figural memory variables in the study group over the control group using Rehacom training program. Conclusion: Rehacom cognitive training has a significant effect in improving the cognitive functions in Parkinson patients.</p>		
Key words	1.	Parkinson.
	2.	cognitive training.
	3.	Rehacom.
	4.	mild cognitive impairment.
Classification number	:	000.000.
Pagination	:	113 p.
Arabic Title Page	:	تأثير تدريب المهارات الذهنية باستخدام برنامج الحاسب الآلى فى مرضى الشلل الرعاش.
Library register number	:	6031-6032.

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

Author	:	Sawsan Mohamed Nabil El-bahrawy
Title	:	Biofeedback Training In Treatment of Vertigo Secondary to Cervical Lesions
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Gehan Mossa Ahmed
	2.	Hanan Abd allah Amer
	3.	Basam Abdel Meged
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Thirty patients from both sexes ,diagnosed as vertigo secondary to cervical spondylosis participated in this study and recruited from Neurology outpatient clinic at Kasr El-Aini Hospital and Faculty of Physical Therapy, Cairo University. Patients assigned into two equal groups ; a control group (GI) and study group(GII). The control group received selected program of physical therapy (hot pack , isometric exercise, stretching exercise and eye head coordination exercises) while GII received the same physical therapy program in addition to biofeedback training byBiodex balance system three times per week for eight weeks. The patients were assessed with overall stability index (OASI) , active cervical range of motion (CROM), vertigo symptom scale and visual analogue scale pre and post program. Results:Post physiotherapeutic evaluation revealed significant difference between group I and group II regarding (OSAI),(CROM) ,vertigo scale and visual analogue scale. Conclusion: Biofeedback training is an effective treatment for vertigo secondary to cervical spondylosis.</p>
Key words	1.	Vertigo.
	2.	cervical spondylosis
	3.	Biofeedback training Biodexbalance system
Classification number	:	000.000.
Pagination	:	77 p.
Arabic Title Page	:	التدريب بالتغذية الرجعية في علاج الدوار الناتج عن إصابات الفقرات العنقية .
Library register number	:	5923-5924.

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

Author	:	Walaa Mohamed Anwar
Title	:	Transcranial Magnetic Therapy Versus Bio Feedback Training on Bladder Dysfunction In Patients With Multiple Sclerosis
Dept.	:	Physical Therapy Department for Neuromuscular and Neurosurgical Disorder and its Surgery.
Supervisors	1.	Nahed Ahmed Salem
	2.	Amr Hasan El Hasany
	3.	Walaa Mohammed Rageb
Degree	:	Master.
Year	:	2018.
Abstract	:	<p>Background: Bladder dysfunction is a common clinical presentation in patients with multiple sclerosis (MS).Objectives: To study the effect of the Transcranial magnetic therapy versus Bio feedback training on bladder dysfunction in patients with MS. Subjects and Methods: Thirty multiple sclerosis patients from both sexes had participated in this study. They were assigned randomly into two equal groups; (GA,GB). Patients in the group (A) had received EMG bio feedback training while patients in the group (B) had received transcranial magnetic therapy. Urodynamic measurement was used to assess the parameters of bladder dysfunction ; Detrusor pressure at maximum flow rate, Bladder volume at the first desire to void, Maximum cystometric capacity, Detrusor pressure, Maximum flow rate. The assessment was done two times; before and after six weeks training period (end of treatment) for all the groups. Results: There was a statistical significant increase in all he measuring parameters of the urodynamic within the groups (GA and GB) except at the maximum cystometric capacity in GB where no significant increase occurred. Also there was no significant difference between both groups at all the parameters. Conclusion: Transcranial magnetic stimulation as well as EMG biofeed back training had a similar and beneficial effect on improving the bladder function in patients with multiple sclerosis.</p>
Key words	1.	Multiple sclerosis.
	2.	transcranial magnetic.
	3.	Bio Feedback Training.
	4.	urodynamic.
	5.	EMG
	6.	Bladder Dysfunction.
Classification number	:	000.000.
Pagination	:	101 p.
Arabic Title Page	:	العلاج بالمجال المغناطيسي عبر الجمجمة مقابل التدريب بالتغذية المرجعية علي خلل المثانة الوظيفي في مرضى التصلب المتعدد.
Library register number	:	5757-5758.