ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery

Author	:	Ahmed Gaber EL Nahry.					
Title	:	Efficacy of Selected Traidmill Training Program on Oxidative					
		Stress in Adolescent Patients with Down syndrome.					
Dept.	:	Physical Therapy Department for Growth and Developmental					
		Disorder in Children and its Surgery.					
Supervisors	:	Amera EL-Tohamy.					
	:	Nagwa Abdel-Meguid Mohammed.					
Degree	:	Master.					
Year	:	2011.					
Abstract	:						

Master Degree 2011

Down syndrome (DS) is the most common genetic cause of mental retardation. There are several lines of evidence showing that individuals with Down syndrome are under unusual oxidative stress. This study was designed to assess the efficacy of electronic treadmill exercise training program on serum malondialdhyde (MDA) as a marker for lipid peroxidation and the antioxidant enzyme glutathione peroxidase (GPx) in adolescents with Down syndrome. The study was carried out on 30 adolescents with Down's syndrome of both sexes their age ranged from 15-18 years; they were selected from the outpatient clinic of children with special need, National Research Center Cairo, Egypt. Thirty clinically healthy subjects, age and sex matched to DS patients were included in the study as control group. Treadmill training program was performed for 12 weeks in Physical Therapy College Cairo University. Results of this study revealed significant increase in GPx activity and decrease in serum level of MDA in DS patients after exercise. We concluded that exercise promotion is very important for people with DS and that it requires attention to motivators and facilitators of exercise adherence. We suggested that exercise at this intensity may decrease risk factors for diseases associated with oxidative stress in those population for better quality of life.

Key words	:	Down syndrome.
	:	Oxidative stress.
	:	Anti-oxidant.
	:	treadmill training.
	:	Training Program.
	:	Adolescent.
Arabic Title Page	:	كفاءة استخدام برنامج مختار للتدريب بالمشاية الكهربائية على الجهد التأكسدى فى مرضى متلازمة داون المراهقين.
		متلازمة داون المراهقين.
Library register number	:	2505-2506.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Ahmed Mohamed El-Sayed El-Nahhas.
Title		Modulation of muscle tightness by manual stretching in children
		with spastic cerebral palsy (A Systematic Review).
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Emam Hassan El-Negmy.
	:	Mohammed Beder Ibrahem
Degree	:	Master.
Year	:	2011.
Abstract	:	

Objective: The aim of this work was to systematically review the studies which assess the effects of manual stretching on muscle tightness in children with spastic cerebral palsy Methods: Systematic review of all published studies with all research designs except expert opinions. A search was made in Medline, Cochrane library, PEDro and Google scholar; from the earliest date to September 2010 Intervention: Passive manual stretching programs performed by the physical therapist in children diagnosed as cerebral palsy with age between birth to eighteen years Outcome measures: Passive joint range of motion. Results: Only 4 studies met the inclusion criteria. Meta-analysis could not be done and findings are presented qualitatively due to heterogeneity of the studies. There is conflicting evidence on whether passive stretching can increase the range of movement in a joint. One study showed no difference poststretching, but three studies showed some improvements in the range of movement. For those studies showing improvements in the range of movements, the effect sizes were fairly small (in general less than 10°).All studies are of poor methodological quality except one study of high quality. Conclusion: The current level of evidence to support the effectiveness of passive manual stretching in children with spastic cerebral palsy remains weak.

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Key words	:	Systematic Review.
	:	Cerebral Palsy.
	:	Stretching.
a second s	:	Range of Motion and Spasticity.
	:	muscle tightness.
	:	Children.
Arabic Title Page	:	تأثير الإطالة اليدوية على قصر العضلات في الأطفال المصابين بالشلل الدماغي التقلصي
		(فحص منهجي).
Library register number	:	2395-2396.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Eman Rshad Ali Salem Elgml.				
Title	:	Efficacy of pulsed Magnetic Field on Bone Density in children with				
		Hemophilia.				
Dept.	:	Physical Therapy Department for Growth and Developmental				
		Disorder in Children and its Surgery.				
Supervisors	:	Faten Hassan Abd Elaziem.				
	:	okia Abd El-shafy Soliman El-Banna				
Degree	:	Master.				
Year	:	2011.				
Abstract	:					

The purpose of this study was to examine the effect of low frequency and low intensity pulsed magnetic field (LFLIPMF) therapy on bone mineral density in children with hemophilia. Thirty children with hemophilia were assigned into two groups of equal number. Each patient of the two groups was evaluated before and after three months of treatment by using hemophilia joint health score scale and dual energy x-ray absorptiometry (DXA). The evaluation procedure involved measurement of bone mineral density of the femur and knee joint bone and hemophilia joint health score scale. Control group (n = 15) that were treated by the selected physical therapy program (strengthening exercises, range of motion exercises and proprioception training) for one hour. Study group (n = 15) that were treated by the same exercise program given to the control group in addition to low frequency and low intensity pulsed magnetic field therapy with a frequency of 33 Hz, intensity of 20G for 30 minutes duration, three sessions were conducted per week (each session lasted one and half hour) for successive three months (12 weeks). Results: The collected data were processed and statististically analyzed. The results showed a statistically significant improvement in all parameters in both control and study groups but still after treatment significant difference was recorded in favor of the study group. Conclusion: it is possible to conclude that (LFLIPMF) is an effective modality in increasing bone mineral density in hemophilia with the exercise programe.

Key words	:	Magnetic Field.
	:	Hemophilia.
	:	Bone Density.
	:	pulsed Magnetic Field.
	:	Children.
Arabic Title Page	:	فاعلية المجال المغناطيسي المتقطع علي كثافة العظام في أمراض سيولة الدم عند الأطفال.
Library register number	:	2501-2502.

PREPARED	BY	NERVEEN	ABD	EL	SALAM	ABD	EL	KADER	AHMED

Author	:	Eman Wagdy Mahmoud.
Title	:	Effect of different backpack loading from standing on ventilatory
		functions for primary school Egyptian children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Elham El Sayed Salem.
	:	Aly Saad Rafea. El Matarya
Degree	:	Master.
Year	:	2011.
Abstract	:	

Background: The carriage of backpacks has been shown to constitute a considerable daily "occupational" load on the spines of school children. Heavy loading of the spine induces vertebral stress which subsequently leads to musculoskeletal problems such as scoliosis, kyphosis and lordosis in children during growth. Purpose: investigate the effect of shoulder girdle loading with different loads on ventilatory functions in primary school children. Methodology: Two hundred and fifty primary school children aged between 8 to 12 years underwent spirometry measurements while adopting the following four conditions: free standing, standing carrying a backpack weighing 10%, 20% and 30% of their body weight. Measures: Forced vital capacity (FVC) in liter, forced expiratory volume in the first second (FEV₁) in liter, forced expiratory volume in the first second / Forced vital capacity ratio (FEV₁/FVC %) and peak expiratory flow rate (PEFR) in liter/min. Results: There were statistically significant differences between the predicted and the actual mean[±]SD values in all measured parameters at all positions (p<0.001). Also, there were statistically significant differences between the actual mean±SD values in all measured parameters at all positions. Finally, a significant decrease was recorded when the actual mean±SD values compared for all measured parameters particularly when the load in the backpack was increase to 30% of body weight. Conclusion: This study demonstrates a restrictive effect on ventilatory functions when a school bag is heavier than 20% of a child's body weight.

Key words	:	Backpack.
	:	Loads.
	:	Ventilatory functions.
	:	Spirometry.
	:	school Egyptian children.

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY DREDARED BY NERVEEN ARD EL SALAM ARD EL KADER AHMED

	:	Children.			
Arabic Title Page	:	تأثير حمل حقيبة الظهر المختلفة من وضع الوقوف علي وظانف الرئة في تلاميذ مدارس			
		المرحلة الابتدائية المصرية			
Library register number	:	2523-2524.			

Author	:	Faten Abedl Mohsen Basyouny.					
Title	:	A systematic review of constraint induced movement therapy in					
		Children with hemiplegia.					
Dept.	:	Physical Therapy Department for Growth and Developmental					
		Disorder in Children and its Surgery.					
Supervisors	:	Amira Mohamed Eltohamy.					
	:	hada Mohamed Anwar.					
	:	amah Attia Tolba El shemy.					
Degree	:	Master.					
Year	:	2011.					
Abstract	:						

Background: constraint induced movement therapy is a potentially effective intervention for children with hemiplegia. It aims to increase spontaneous use of the affected upper limb and limit the effect of developmental disregard. Purpose: to determine whether constraint induced movement therapy, modified constraint induced movement therapy or forced use therapy is effective to improve upper limb function in hemiplegic cerebral palsied children. Search strategy: MEDLINE Pubmed and MEDLINE Ovid and Cochrane controlled trials register. Selection criteria: all randomized controlled trials (RCTs) that comparing CIMT, mCIMT and Forced use therapy with traditional therapy such as physiotherapy, occupational therapy or no treatment. Limitation: only one reviewer extracted the data using standardized form: each trial was assessed for its validity and only five studies met the inclusion criteria. Results: The included studies showed positive effect that support the use of CIMT, mCIMT and forced use therapy for treating upper extremitry in hemiplegic cerebral palsied children.

Key words	: Systematic review.
	: cerebral palsy.
	: Hemiplegia.
	: Constraint induced movement therapy.
	: modified Constraint induced movement therapy

PREPARED	BY	NERV	D.	EN ABD	EL	SALAM	ABD	EL	KADER	AHMED

	:	Children.
Arabic Title Page	:	فحص منهجى لتأثير العلاج الحركي الناتج عن تقييد الأطفال المصابين بالفالج الشقى.
Library register number	:	2413-2414.



PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Hanady Abd Allah Mouhamed.
Title	:	Efficacy of hippotherapy on cerebral palsy (a systematic review)
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Amira Mohamed Eltohamy.
	:	Manal Salah El Dien.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Background: hippotherapy is effective method for treatment of cerebral palsy, and may causes development in gross motor function and, improvement muscle symmetry in the affected children. Purpose: to systematicly review whether hippotherapy, (horse riding therapy) or (equine assisted therapy) is effective to improve gross motor function and muscle symmetry of cerebral palsied children. Search strategy: MEDLINE Pubmed and MEDLINE Ovid and Cochrane controlled trials register and the search was last updated on july 2011. Selection criteria: all randomized controlled trials (RCTs) that made on effect of hippotherapy on cerebral palsied children. Limitation: only one reviewer extracted the data using standardized form: each trial was assessed for its validity and only three studies met the inclusion criteria. Results: The included studies showed positive effect that support the use of hippotherapy for treating muscle symmetry on cerebral palsy children, and gross motor function may be improved.

motor function may be improved.			
Key words	:	Systematic review.	
DUVC	:	cerebral palsy.	
PHYS	••	Hippotherapy.	
	••	equine assisted therapy.	
	:	Randomized controlled trial.	
	:	horse riding therapy.	
	:	Children.	
Ar <mark>abic Title Page</mark>	:	تأثير ركوب الخيل العلاجي علي أطفال الشلل الدماغي (فحص منهجي).	
Library register number	:	2643-2644.	

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Heba Hamada Soliman.
Title	:	Effect of Anterior Versus Posterior Walkers on Trunk Kinematics
		in Spastic Diplegic Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Elham El Sayed Salem.
	:	Hatem Abd El Rahman.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Walking aids are frequently prescribed to children with spastic cerebral palsy provide the additional stability required from ambulation. The purpose of this study was to determine which type of walkers " anterior or posterior " was efficient for more trunk control in spastic diplegic children .Thirty spastic diplegic children with chronological age from (5-6) years and developmental age ranged from 12-14 months according to Denver developmental screening participated in this study, they represent group (A), and thirty normal children, they represent group (B). Children of both groups were assessed for trunk kinematics (Pelvic obliquity, Lateral trunk angle and trunk flexion) by AutoCad system. The results of this study revealed a significant improvement in the measuring variables (p<0.05) on trunk kinematics when used posterior walker than anterior walker in the most parameters of gait cycles .From the obtained results of this study, it may be concluded that the posterior walker is efficient for more trunk control in spastic diplegic children. So posterior walker should be added as an essential physical therapy aid to assist trunk control for those children.

Key words	:	Cerebral Palsy.
	:	Spastic Diplegia.
	:	Trunk Kinematics.
	:	Anterior Walkers .
	:	Posterior Walkers .
	:	Children.
Arabic Title Page	:	تأثير المشاية الأمامية مقابل الخلفية على حركة الجذع للأطفال المصابين بالشلل المزدوج
		التقلصى.
Library register number	:	2579-2580.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Heba T-Alla Nabil Ahmed.
Title	:	Assessment Of Growth And Development In Children With
		Congenital Hypothyroidism.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Amira Mohamed El Tohamy.
	:	Ghada Mohammad Anwar.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Growth assessment is an essential component of pediatric health surveillance. Developmental assessment includes early identification of problems through screening and surveillance, and more definitive assessment including both standardized and non standardized measures. The purpose of this study was to assess growth and development in children with congenital hypothyroidism on treatment and compare them with normal children This study included 25 congenital hypothyroidism children on treatment (group A) and 100 normal children (group B) both groups ranged in age from 3-12 months. Growth assessments included the measurement of height, weight and head circumference; while developmental assessment was performed by using (PDMS-2). The results of assessments obtained, indicated no significant difference between both groups of children in their scores of (PDMS-2). In conclusion, Early Screening of children with congenital hypothyroidism is of great value for those children

Key words		Growth assessment.
	:	Development.
TH	:	congenital hypothyroidism.
	:	Children.
Arabic Title Page	:	تقييم مراحل النمو والتطور في الأطفال حديثي الولادة المصابين بنقص هرمون الغدة
		الدرقية.
Library register number	:	2645-2646.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Mariam Makram Samaan.
Title	:	Efficacy Of Treadmill Training On Gait In Children With Down
		Syndrome: A Systematic Review.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Faten Hassan Abd El-Azim.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Objective The aim of this review was to study the effectiveness of treadmill training on primary and secondary outcomes in infants with Down syndrome Methods Systematic Review of randomized controlled trials ,search made in pub med, Ovid, Pedro and Cochrane, all studies were post 2000 Intervention treadmill training either alone through different protocols or combined with other applications (Like orthoses) in infants diagnosed with Down syndrome aged between birth and 23 months ,outcomes classified into primary and secondary Results seven studies were selected , included in Meta analysis for only the primary outcome ,onset of independent walking , other outcomes were subjected to descriptive analysis . Treadmill intervention decreased age at walking onset significantly , improved gait patterns , increased number of alternating steps / min , improved the use of walking strategy than crawl strategy, tends to increase Physical Activity level , motor skill development and decreased foot rotation asymmetry but not to significant level Conclusions There is an evidence supporting the positive effect of treadmill training especially high intensity protocol mainly on decreasing age at walking onset , improving gait patterns and tending to increase PA-level , motor skill development but has minimal effect on foot rotation asymmetry or physical growth measures in infants with Down syndrome.

incustices in manus with Down syncholic.			
Key words	:	Down syndrome.	
	:	treadmill training.	
	:	Gait in Children.	
	:	systematic review.	
	:	Training Program.	
	:	Children.	
Arabic Title Page	••	كفاءة التدريب بالسير المتحرك على المشي في الأطفال المصابين بمتلازمة داون: فحص	
		منهجي.	
Library register number	:	2641-2642.	

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Mohamed Esmail Attia Elassal.
Title	:	Ankle Eversion to Inversion strength Ratio and Static Balance
		Control in Athletic and Nonathletic Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
_		Disorder in Children and its Surgery.
Supervisors	:	.Emam Hassan El-Negmy.
Degree	:	Master.
Year	:	2011.
Abstract	:	

The purpose of this study was to (1) compare unilateral ankle eversion to inversion strength ratio (E/I R) in the athletic and nonathletic children and (2) determine the relationship between ankle E/I R and static balance control in athletic and nonathletic children. Forty young, children hadn't suffered from any recent injuries in the lower limbs. They were classified into two groups of equal numbers, athletic and nonathletic groups. Ankle E/I R was measured by an Isokinetic dynamometer at speeds of 30°/s and 120°/s. Balance control was determined by Biodex stability system which has variable degrees of instability. Significant differences in ankle E/I R in the dominant limbs existed between the athletic and nonathletic at both velocities 30°/s and 120°/s. Ankle E/I R was greater in athletic than in nonathletic. In addition, Significant Inverse correlation was identified between the ankle E/I R for the dominant limbs and static balance control in athletic and nonathletic children. The data indicated that the greater the E/I R, the higher the balance control.

Key words	:	Eversion to Inversion strength ratio.
PERS	:	balance control.
	:	dominant limb.
	:	pediatric sports injuries.
	:	ankle stability.
	:	Children.
Ar <mark>abic Title Page</mark>	:	نسبة قوة الانعكاس إلى الانقلاب لمفصل الكاحل و التحكم في التوازن الثابت لدى الأطفال
		الرياضيين و غير الرياضيين.
Library register number	:	2499-2500.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Nehad Ahmed Youness.
Title	:	Modulation of Balance By Using Weights In Children With
		Cerebellar Ataxia.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Emam Hassan El-Negmy.
	:	Amina Hendawy Salem
Degree	:	Master.
Year	:	2011.
Abstract	:	

The Propose of this study was to investigate the effect of using weights in modulation of balance in children with cerebellar ataxia. Twenty five children of cerebellar ataxia ranged in age from 5 to 13 years participated in this study. They were selected from both sex and were classified randomly into 2 groups, control group (A) that include 10 children & study group (B) that include 15 children. Balance parameters were assessed using the biodex stability system in both groups before and after three months of the application of the treatment program. The control group (A) received a selective physical therapy balance training program for one hour. The study group (B) received the same program received by the control group while using weights around the distal end of both lower legs. Before starting treatment program no significant difference was recorded between the mean values of the two groups. The result also revealed statistically significant improvement in the measuring 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 which support using weights around distal end of both lower legs as an additional methods of the rehabilitation program of children with cerebellar ataxia while using balance training program.

pi ogi unit		
Key words	:	Cerebellar Ataxia.
	:	Balance.
	:	Postural Control.
	:	Weights.
	:	Children.
	:	Balance.
Arabic Title Page	:	إستخدام الأوزان على الساقين لتحسين الاتزان لدى الأطفال المصابي بالرنح المخيخي.
Library register number	:	2379-2380.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Nermeen Ahmed Mohammed Sadek.
Title	:	Motor Development in Preschool Children with Autism Spectrum
		Disorder.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Amira Mohamed Al-Tohamy.
	:	Salah Mahmoud Ibrahim.
Degree	:	Master.
Year	•	2011.
Abstract	:	

The purpose of this study was to evaluate the motor skills of preschool children with autism spectrum disorders using a standardized motor testing (The Peabody Developmental motor scale Second Edition PDMS-2) to determine the presence and degree of delay in their motor skills, and to compare their motor development with normally developed children. Subjects and procedures: Twenty five autism spectrum disorders children of both sexes were selected to participate in this study (group A) and were compared to 100 normally developed children of both sexes (group B). Children ages in both groups ranged between 3 to 6 years. Children in the ASD group (A) had mild autistic features according to the childhood autism rating scale (CARS). They had a score ranged between 25 to 35 according to the CRAS scale. Gross and fine motor skills were assessed for both groups. Each child in both groups was examined individually. Results: The results of this study revealed a statistically significant difference in the measurement of both gross and fine motor skills when compared the standard scores, motor quotients and age equivalents (in months) mean values between both groups. In Conclusion: From the obtained results of this study, it can be concluded that children with autism spectrum disorders had developmental delays in their motor skills in comparison to normally developed children.

Key words	:	Autism spectrum disorders.
	:	Autism.
	:	motor development.
	:	preschool children.
	:	Children.
Arabic Title Page	:	التطور الحركي لدى الأطفال المصابين بالتوحد قبل سن المدرسة.
Library register number	:	2665-2666.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Riham Abed Allatif Haji.
Title	:	Effect of breathing exercise on gross motor functions in spastic
		diplegic children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Kamal El Sayed Shoukry.
	:	Elham El Sayed Salem.
	:	Hamed Abd El Hafith Abd Allah.
Degree	:	Master.
Year	:	2011.
Abstract	:	

The purpose of this study was to investigate the effect of breathing exercises on gross motor functions in spastic diplegic children, forty spastic diplegic children of both sexes, their age ranged from five to seven years old, chosen from the outpatient clinic of Physical Therapy, Cairo University were participated in this study. They were classified randomly into two groups of equal number (Study and Control), both groups participate in selective physical therapy for three successive months, three times per week each session for one hour , study group participate in breathing exercise program for three successive months, three times per week each session for one hour. maximum voluntary ventilation were assessed using the electronic respirometer, gross motor functions were assessed by gross motor functional measurement(GMFM) for study and control groups before and after the application of the treatment program. The results of this study revealed statistically significant improvement in the measured variables of the study and control groups when comparing the post treatment mean values of the study group with the control group.

Key words	:	breathing exercises.
	:	maximum voluntary ventilation.
	:	gross motor function.
	:	cerebral palsy.
	:	spastic diaplegia.
	:	Children.
Arabic Title Page	:	تأثير تمرينات التنفس على الوظائف الحركية الكبرى عند الأطفال المصابين بالشلل
		التقلصى المزدوج.
Library register number	:	2391-2392.

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	:	Shaimaa Mahmoud Hassan.
Title	:	Efficacy of Dual-Task training program on dynamic balance in
		children with spastic diplegia.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	:	Kamal El Sayed Shoukry.
	:	Kamilia Saad Abdel Hameed.
	:	Gehan Mosad Abdel Maksoud.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Background: The purpose of this study was to investigate the efficacy of dual-task training program (dynamic balance training simultaneously with attentional task), in addition to traditional physical therapy program on dynamic balance in children with spastic diplegic. Objectives: To evaluate dynamic balance stability in children with spastic diaplegic after single-task training (traditional Physical therapy program) versus dual-task training (traditional Physical Therapy program with attentionl tasks) and to compare it with those healthy children. Methods: Fifteen healthy children (normal group) and twenty spastic diplegic children (classified randomly into two groups of equal number, study group I, and study group II) from both sexes, their age ranged from six to nine years, chosen from the outpatient clinic of Faculty of Physical Therapy, Cairo University. Dynamic balance parameters were assessed by using both (1) Biodex Stability System (BSS) which measured the dynamic balance parameters before and after the application of single and dual-task training program, and (2) Berg Balance Scale (BBS) which measured the parameters before and after one, two, and three months of application of the single and dual-task training program. Results: (1) The BSS revealed a statistically significant improvement in the study group I. (2) the BBS revealed statistically significant differences between study group I and study group II with significant improvement in favor of study group I. Conclusion: The significant improvement in the dynamic balance parameters (study group I) was attributed to dual-task training program.

Ke <mark>y words</mark>	:	Cerebral palsy.
	:	Spastic diplegia.
	:	Postural control.
	:	Cognition.
	:	Attention.
	:	Dual-task.
	:	Children.
Arabic Title Page	:	تأثير برنامج التدريب بالمهمة المزدوجة على الاتزان الديناميكي عند الأطفال المصابين
		بالشلل التقاصي.
Library register number	:	2737-2738.

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR GROWTH AND DEVELOPMENT DISORDER IN CHILDREN AND ITS SURGERY PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED



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