## **Physical Therapy Department for Growth and Development Disorder in children and Its Surgery**

**Master Degree** 

#### 2005 Author Arafa Hamed Sanosy. : Effect of Hydrotherapy on Ventilatory Functions in children Title : with Down's Syndrome. Physical Therapy Department for Growth and Developmental Dept. : Disorder in Children and its Surgery. **Supervisors** Elham EI- Sayed Salem. 1. 2. Faten Hassan Abdel- Azeim. 3. Amina Hendawy Salem. : Master. Degree 2005. Year : Abstract :

The purpose of this study was to investigate the effect of hydrotherapy on ventilatory functions in **Down's syndrome children.** Subjects: Thirty Down's syndrome children complainin~from recurrent chest infection, their age ranged between 5-10 years (X 8.13 :f: 0.354 years, they were male and female. The subjects were randomly assigned into the study group a~d cogtrol group, each group included ~ 5 chilgren. Methods: Both groups received selected physical therapy program for three months in addition to hydrotherapy for the study group. Ventilatory functions by using Impulse Oscillometry and Peak Expiratory Flow Meter. Peripheral Oxygen saturation by using Pulseoximeter, and chest expansion by using Palpmeter, were measured before and after treatment to serve as objective indications of therapy effectiveness. Results: No significant difference was recorded before treatment between the two groups. The post treatment findings of the current study revealed high significant improvement in all measured parameters for both groups. There were high significant mean differences between post treatment findings between the two groups in favor of the study group. Conclusion: It was concluded that hydrotherapy is safe and could be an effective modality to improve ventilatory functions in Down's syndrome children. It can be considered as an integral part of the chest physical therapy program for children with Down's syndrome.

Key words	1.	Hydrotherapy.
	2.	Down's Syndrome.
	3.	Ventilatory Functions.
	4.	Children.
Arabic Title Page	:	تأثير العلاج المائي على الوظائف الرئوية عند أطفال متلازمة داون.
Library register number	:	1205-1206.

Author	:	Azza Sayed Mohamed EI- Sayed.
Title	:	Effect of Three Various Motivations on Management of Head
		Control in Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal EI- Sayed Shoukry.
	2.	Elham EI- Sayed Salem.
	3.	Fatma Abd EL-Fattah Hegazy.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to investigate the effect of three various motivations on management of head control in thirty cerebral palsied children, who were divided into three groups (Curiosity, Hunger and Achievement groups). The groups received specific program of head control exercises by using of motivation. Evaluation was carried out for each child of three groups before and after 3 months of treatment. It included determining of head control variables by Auto CAD method. The results revealed a significant improvement in head control variables, for the three groups after the treatment, but no significant difference was noticed when compared post treatment results of each group within the other groups. The significant improvement of head control variables may be attributed to the effect specific program.

Key words	1.	Cerebral palsy.
	2.	Head control.
	3.	Motivation.
DHVSTCA	4.	Children.
Arabic Title Page	•••	تأثير ثلاث <mark>ة دوافع مختلفة في علاج تحك</mark> م الرأس في الاطفال المصابين بالشلل المخي.
Library register number	: •	1223-1224.

# THESES 2005

Author	:	Enas Adep Soryal Daud.
Title	:	Effect of Functional Electrical Stimulation on Reaching in
		Spastic Hemiplegic Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Elham El Sayed Salem.
_	2.	Faten Hassan Abdel Aziem.
	3.	Khalid Ahmed Olama.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to investigate the effect of functional electrical stimulation combined with especially selected exercise program on reaching kinematic parameters, in hemiplegic cerebral palsied children. Thirty hemiplegic cerebral palsied children (14 girls and 16 boys) ranging in age from three to five years participated in this study. They were divided randomly into two groups of equal numbers (control and study). The control group was treated by especially selected exercise program for reaching abilities, while the study group was received the same program given to the control group in addition to the functional electrical stimulation during the exercise program, via the faradic stimulation with special parameters and special ON / OFF time. Both groups received the traditional exercise program. Evaluation was carried out for each child individually before and after three months of application of different treatment programs, it included measurement of the kinematic parameters of reaching task forward to midline object, including movement time, peak velocity, time to reach peak velocity, percent of reach to peak velocity, number of movement units and percent of time of the first movement time. Also every child evaluated by the modified functional scale of reaching to detect the functional improvement of the evaluated reaching task. The results of the study after the suggested period of treatment revealed significant improvement in most of the measuring variables (p< 0.05) pre and post treatment in both groups with higher percentage of improvement of the study group. From the obtained results of this study, it can be concluded that, improvement in the study group may be attributed to the effect of functional electrical stimulation during the exercise program. So it is considered a beneficial adjunct with the traditional line of treatment in habilitation of reaching function in the hemiplegic cerebral palsied children.

Key words	1.	Functional electrical stimulation.	
	2.	Reaching.	
	3.	hemiplegic cerebral palsy.	
	4.	Children.	
Arabic Title Page	:	لتنبيه الكهربائي الوظيفي على قدرة الوصول لليد عند الأطفال المصابين بالشلل	تأثير ال
		ي التقلصي.	النصفي
Library register number	:	1183-1184.	

Author	:	Fathia Mostafa Ahmed.
Title	:	Hand Grip Strength and Wrist Joint Range of Motion in
		Relation to Various Body Postures in Spastic Diplegic
		Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal EI- Sayed Shoukry.
	2.	Hoda Abdel Azim El Talawy.
	3.	Ehab Abo El Soad Abd El Kafy.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to analyze the strength of hand grip and wrist joint range of motion from different positions (supine, prone, side lying, and sitting) in spastic diplegic cerebral palsied children. Forty spastic diplegic cerebral palsied children aged from four to six years participated in this study. Hanoun medical stem was used as a hand dynamometer to measure hand grip strength ld electronic goniometer to measure wrist joint range of motion. All children were tested for the four positions to exert their maximal hand grip and active range of wrist joint. The results of the study showed that sitting position had the highest significant mean values then the supine lying position, then the side lying position and the least was the prone lying position for hand grip and wrist joint extension. For wrist lint flexion, the highest significant mean values was the sitting position then supine lying then prone lying and the least was the side lying.

Key words	1.	hand grip.	
	2.	wrist joint.	
DHVSTCA	3.	body posture.	
FILISICA	4.	Children.	
ITR	5.	cerebral palsy.	
	6.	diplegia.	
Arabic Title Page	:	ساع الجسم المختلفة بقوة قبض اليد ومدى حركة الرسغ عند الاطفال	علاقة اوم
		بالشلل الدماغي التقلصي المزدوج.	المصابين
Library register number	:	1231-1232.	

Author	:	Ghada Ibrahim Saleh.
Title	:	Validity of Oral Aerobics in speech improvement in Dysarthric
		children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam El Negamy.
	2.	Eman EL Hadidy.
	3.	Dalia Mostafa.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The aim of this study was to evaluate the validity of Oral Aerobics in speech improvement in dysarthric children. Thirty spastic dysarthric children and fifteen normal children of both sexes participated in this study, their age ranged ITom 5 to 10 years old. The thirty dysarthric children was divided randomly into two equal group A (control): this group received only speech sessions and group B (study): this group received both speech sessions in addition to Oral Aerobics and group C (normal): included 15 normal children. The study was carried in the Phoniatric unit, Faculty of Medicine, Cairo University. For evaluation oromotor assessment, articulation test, Computerized Speech Lab.(CSL) and the nasometer were used pre and post treatment. For treatment mirror, tongue depressors bubbles, balloons and candles were used. The collected data was statistically analyzed using unpaired t-test and independent t-test. The results revealed a significant improvement in oral movements, the Phonemes /f/w/, / $\Theta$ /t/, /s/and/in both groups, with more significant improvement was consistenly recorded in the study group.

Key words	1.	Dysarthria.	
PHYSICA	2.	, Oral Aerobics.	
1 1 0	3.	Speech improvement.	
	4.	Children.	
THEC	5.	Arabic Consonants.	
Arabic Title Page	:	التدريبات الهوائية في تحسين لغة الاطفال المصابين بالحبسة الكلامية.	مصداقية
Library register number	:	1259-1260.	

Author	:	Marwa Mamdouh Ali.
Title	:	Effect of Tonic Vibratory Reflex on Reaching in Spastic
		Hemiparetic Cerebral Palsy Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negamy.
	2.	Elham El-Sayed Salem.
	3.	Khaled Ahmed Mamdoh.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The aim of this study was to evaluate the effect of tonic vibratory reflex on reaching in spastic hemiparetic cerebral palsy children. Thirty spastic hemiparetic children (16 females and 14 males) ranging in age from three to five years old participated in this study. The study sample was classified randomly into two groups (control and study) of equal numbers. The study group received traditional exercise program and reaching exercise programs after application of tonic vibratory reflex (TVR) for triceps and common extensor origin, while the control group received the same exercise programs as the study group without TVR. In all patients the angles of shoulder, elbow and wrist joints were evaluated during reaching before and after the suggested treatment program. The results collected before application showed no statistically significant difference between the two groups, while the difference between before and after application also significant in both groups. After application the difference between the two groups was statistically significant in favor of the study group. The significant improvement recorded in the control group may be attributed to the effect of traditional and reaching exercise program, while the highly significant improvement recorded in the study group may be attributed to the additional use of T.V.R. In conclusion additional use of T.V.R. to the regular exercise programs can be suggested to improve reaching in spastic hemiparetic C.P. children.

Key words	1.	CP.	
THES	2.	Ctonic vibratory reflex.	
	3.	Reaching.	
	4.	Children.	
	5.	motion analysis.	
Arabic Title Page	:	تزاز الكهربي عالي التردد على مهارة توصيل اليد في الأطفال المصابين	تأثير الاه
		ثىقي التشنجي التقلصي.	بالفالج الن
Library register number	:	1185-1186.	

Author	:	Marwa Mohamed Ibrahim Hafez.
Title	:	Effect of Electrical Stimulation on Standing Posture in Spastic
		Diplegic Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
_		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hasan El-Negmy.
_	2.	Hoda Abd El-Azeim El-Talawy.
	3.	Khaled Ahmed Mamdouh.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to investigate the role of Electrical Stimulation (E.S.) of quadriceps and anterior tibial muscle group while standing on a standing frame in order to improve the standing ability for spastic diplegic children. The study was conducted on thirty spastic diplegic children (16 females and 14 males); ranging in age from 2 to 4 years old. They were classified randomly into two groups of equal number, (control and study group). The control group received the traditional physical therapy program including standing on the standing frame for 30 minutes, while the study group received the same program in addition to E.S. of both quadriceps and anterior tibial muscles during standing on the standing frame for 30 minutes. Both H/M ratio and the level of motor development were assessed in both groups before and after 3 months of treatment. The results of this study revealed statistically highly significant improvement in both of the measuring variables of the study and control groups (P < 0.0001) when comparing the pre and post treatment results, also, significant difference was recorded when comparing the post treatment results of the study and control groups (P < 0.05) in favor of the study group. From the obtained results of this study, it can be concluded that, E.S. can be used as an adjunct to the traditional physical therapy program in order to improve standing posture in spastic diplegic children.

Key words	1.	Electrical stimulation.
THES	2.	spasticity.
	3.	standing posture.
	4.	Children.
	5.	cerebral palsy.
	6.	diplegia.
Arabic Title Page	••	تأثير التنبية الكهربي على وضع الوقوف عند الأطفال المصابين بالشلل المخي
		التشنجي المزدوج.
Library register number	:	1171-1172.

Author	:	Mohamed Abd EI-Fattah Abd EI-Ghafar.
Title	:	Efficacy of hyperbaric oxygen therapy on spastic cerebral palsy children.
Dept.	:	Physical Therapy Department for Growth and Developmental
_		Disorder in Children and its Surgery.
Supervisors	1.	Faten Hassan Abd EI Aziem.
	2.	Shadia Abd EI Aziz Mohamed.
	3.	Fatma A. Hegazy.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to investigate the effect of hyperbaric oxygen therapy in modulation of muscle tone and promotion of motor development in spastic cerebral palsy children. Twenty spastic cerebral palsy ranged in age from 2 to 5 years participated in this study. The study sample was divided into two groups of equal number (control and study groups). The control group was treated by the selected designed. Physical therapy program. The study group received hyperbaric oxygen therapy in addition to the same selected designed physical therapy program. Evaluation was carried out for each child of both study and control groups before, after one month and three months of treatment. It included measuring of degree of spasticity by using EMG apparatus for HIM ratio, and measuring gross motor skills by using Denver developmental screen test. The results of this study and control groups after the treatment (p<0.05). But when compared the results of study and control groups there was non-significant differences in both reduction of spasticity or improvement of gross motor skills. This is non-significant differences may be attributed to small sample size and low number of hyperbaric oxygen therapy sessions.

Key words	1.	Cerebral palsy.	
	2.	hyperbaric oxygen therapy.	
the second second second second	3.	HIM ratio.	
THES	4.	Children.	
	5.	Denver.	
Arabic Title Page	:	للاج بالاكسجين تحت الضغط على الاطفال المصابين بالشلل المخي التشنجي.	تأثير الع
Library register number	••	1201-1202.	

Author	:	Mohamed Ahmed Mahmoud Eid.
Title	:	Efficacy of Low Frequency and Low Intensity Pulsed Magnetic
		Field in Treatment of Juvenile Rheumatoid Arthritis.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Mohamed Tawfik Mahmoud.
	2.	Faten Hassan Abd Elaziem.
	3.	Hala Salah El- Dein Mohamed Talaat.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to examine the effects of low frequency and low intensity pulsed magnetic field therapy on children with polyarticular JRA. Thirty children were assigned randomly into 2 groups. Subjects in the study group (n = 15) received traditional physical therapy program (Infrared radiation, stretching exercises and strengthening exercises in the form of bicycle ergometere and treadmill training) as well as low frequency and low intensity pulsed magnetic field (LFLIPMF), whereas subjects in the control group (n = 15) received traditional physical therapy program only. The following parameters including pain, swelling, laboratory examinations and functional activity (angular displacement of both knee joints during gait cycle) were measured before and after 3 months of treatment. Results: The results showed significant improvement in all parameters of both knee joints in study group compared with those of control group. Conclusion: on the basis of the present data, it is possible to conclude that LFLIPMF is effective as method of management in controlling hallmark signs and symptoms of juvenile rheumatoid arthritis (JRA) at least with the parameters used in the present study.

Key words	1.	Magnetic Field.	
and the second	2.	Juvenile Rheumatoid Arthritis.	
	3.	Children.	
Arabic Title Page	:	جال المغناطيسي المتقطع منخفض التردد والشدة في علاج الروماتويد عند	فاعلية الم
THES		S 2005	الأطفال.
Library register number	:	1163-1164.	

Author	:	Mohamed Fawzy EI-Banna.
Title	:	Peripheral Nerve Conduction Velocity Modulation in
		Hemiparetic Children via Physical Therapy Program.
Dept.	••	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan EI-Negamy.
	2.	Khaled Ahmed Mamdoh.
	3.	Gehan H. El- Meniawy.
Degree	:	Master.
Year	••	2005.
Abstract	:	

The purpose of this study was to establish a relation between the physical therapy program and one of the neurophysiological functions which is the peripheral nerve conduction velocity (NCV) of the upper limb in hemiparetic children. Twenty hemiparetic children ranged in age from 3 to 5 years old participated in this study. They were classified randomly into 2 groups of equal numbers, control and study groups. The control group received a traditional exercise therapy program only. And the study group received reciprocal electrical simulation for wrist-fingers flexors and extensors, in addition to traditional exercise therapy program given to the control group. No statistical difference was recorded between NCV of the two groups pre treatment. Comparing the post-treatment results of the two groups showed some neurophysiological changes in the form of increasing of NCV of the nerves of the affected side in the favor of the study group, but it was statistically non-significant.

Key words	1.	Cerebral palsy.	
	2.	Hemiplegia.	
PHYSICA	3.	nerve conduction velocity.	
	4.	Children.	
	5.	reciprocal electrical stimulation.	
Arabic Title Page	:	عة توصيل الاعصاب الطرفية لمرضى الشلل النصفي لدى الاطفال عن طريق	تعديل سر
		لاج الطبيعي.	بنامج العا
Library register number	:	1249-1250.	

Author	:	Rami Mahmoud Mohmmed Gharit.
Title	:	Faradic Stimulation versus Joint Approximation in Treatment
		of Hemiplegic Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam EI-Negmy.
	2.	Hoda AI- Talawy,
	3.	Khaled Mamdouh.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to evaluate and compare the effect of joint approximation (compression) and faradic stimulation in modulation of muscle tone in hemiparetic cerebral palsied children. Twenty children aged between 3 and 5 years old participated in this study. They were divided randomly into two groups of equal number, 10 patients each. One group received faradic stimulation while the other received approximation. Both participating groups received the same traditional physical therapy program. In addition the H/M ratio was recorded before and after the suggested treatment using EMG apparatus. Treatment of each patient in both groups was conducted for 3 months at a 3 times/week basis. The results of this study revealed a significant H/M ratio reduction in the group that received faradic stimulation while an insignificant reduction was recorded in the group that received approximation.

Key words	1.	Cerebral Palsy.	
	2.	Hemiplegia.	
	3.	Approximation.	
PHYSICA	4.	Children.	
	5.	H/M ratio.	
	6.	Faradic stimulation.	
Arabic Title Page	:	اردي مقابل تقريب سطحى المفصل لعلاج مرضى الشلل النصفى التشنجى	التنبية الف
		ﺎﻝ. ً ، ، ، ، ، ، ، ، ، ، ، ،	لدى الاطف
Library register number	:	1247-1248.	

Author	:	Shamekh Mohamed El-Shamy.
Title	:	Role of Functional Electrical Stimulation in Gait Pattern for
		Hemparetic Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Emam Hassan El-Negmy.
	2.	Elham El-Sayed Salem.
	3.	Khaled Ahmed Mamdouh.
Degree	:	Master.
Year	:	2005.
Abstract	:	

The purpose of this study was to evaluate the changes of gait pattern in hemiparetic cerebral palsied children following the application of functional electrical stimulation in addition to a specially designed exercise program. Thirty hemiparetic children, ranged in age from 6 to 8 years old participated in this study. They were classified randomly into two groups of equal number, (control and study). The control group received a specially designed exercise program. The study group received functional electrical stimulation of anterior tibial group in addition to the program given to the control group. Gait parameters were assessed before and after three months of application of the treatment program using motion analysis system. The results of the study revealed significant improvement in all measured variables for both groups with greater improvement in the favor of the study group.

Key words	1.	Functional electrical stimulation.	
	2.	hemiplegia.	0
	3.	Gait Pattern.	
DUNCTOR	4.	Children.	
PHYSICA	5.	Cerebral Palsied Children.	
Arabic Title Page	:	به الكهربائي الوظيفي في أنموذج المشي لمرضى الشلل النصفي الطولي لدى	دور التنبي
			الأطفال.
Library register number	:	1161-1162.	

Author	:	Zeinab Ahmed Hussien.
Title	:	Evaluation of Static and Dynamic Postural Control in
		Cerebral Palsied Children.
Dept.	:	Physical Therapy Department for Growth and Developmental
		Disorder in Children and its Surgery.
Supervisors	1.	Kamal El Sayed Shoukry.
	2.	Faten Hasan Abd El-Azeim.
	3.	Shadia Abd El-Aziz.
Degree	:	Master.
Year	:	2005.
Abstract	•	

The purpose of this study was to evaluate the motor strategies of postural control in right hemiplegic cerebral palsied children. Thirty children perfumed this test, 15 were nominal and others were right hemiplegic cerebral palsied children. All children stood on tilt board and imaged from frontal and lateral view during static and dynamic situations. The results revealed significant difference in angles of motor strategies between nominal and hemiplegic cerebral palsied children.

Key words	1.	hemiplegia.
	2.	cerebral palsy.
	3.	postural control.
	4.	Children.
	5.	evaluation.
Arabic Title Page	:	تقييم التحكم الاستاتيكي والايناميكي في قوام الأطفال المصابين بالشلل الدماغي.
Library register number	:	1203-1204.

LIBRARY

THESES 2005