Abstract

Background: Cerebral palsy (CP) registers appear to be appropriate tools for answering questions regarding the prevalence and characteristics of this common childhood disability. Purpose: This study was conducted to establish data base for CP in Tanta city and its surrounding cities (KafrAlzayat, Basoon and Elsanta) ,Al-qarba Governorate. Subjects, Materials and Methods: Children with CP who are receiving physical therapy services of both genders, from 4 months to 16 years old in Tanta and its surrounding cities were involved. The outcome measures were Gross Motor Functional Classification System (GMFCS), Gross Motor Functional Measurement (GMFM), Manual ability classification system (MACS) and Viking Speech Scale. Results: Within the study population (224 children), 79.9% are spastic type, 9.8% are dyskinetic, 5.8% are ataxic and 4.4% are hypotonic. Percentage based on GMFCS were; 12.9% for level I, 13.8% for level II, 29% for level III, 20.9% for level IV, and 23.2% for level V. According to MACS levels (I,II,III,IV and V) were23.4%,9.3%, 20.3%,45.3% and 1.5% respectively and Viking levels I,II,III, and IV were 20.3%,22.9%,35.1%,21.6% respectively Conclusion: Incidence of spastic type of CP is the major while hypotonic is the least prevalence.

Key words

1. Registry.
2. Tanta - Egypt.
3. Registry of cerebral palsy.
4. Cerebral palsy registry.
5. GMFM.
6. GMFCS.
7. MACS.
8. VIKING.
Background: Normal ventilation depends on normal components of neuromuscular system postural control is one of the important factores could affect respiration functions. Purpose of study: To assess the correlation between spasticity, scoliosis and ventilatory function in hemiplegic children. Subjects: Thirty hemiplegic children of both sexes (15 boys and 15 girls) with ages ranging from 6 to 10 years and suffering from scoliosis. Methods: Subjects were divided into two groups (A,B), according to their age. Group A (6-8) years old, Group B (8-10) years old. Each child measure spasticity by using modified ashworth scale, scoliosis by using cobb's angel, ventilator function by using vitalograph alpha touch (to detect forced vital capacity, foeced expiratory volume in the first Second, Forced Expiratory Volume in the first second percentage, Forced Expiratory Flow 25-75%, Peak Expiratory Flow). Results: there was a strong positive significant correlation between the cobb's angle and mean difference of forced vital capacity, foeced expiratory volume in the first Second, Forced Expiratory Volume in the first second percentage, Forced Expiratory Flow 25-75% and Peak Expiratory Flow. Also there was a strong positive significant correlation between the degree of spasticity and mean difference of forced vital capacity, foeced expiratory volume in the first Second, Forced Expiratory Volume in the first second percentage, Forced Expiratory Flow 25-75% and Peak Expiratory Flow. Conclusion: Both statistical and clinical signs revealed a strong significant correlation between cobb's angle, degree of spasticity and mean difference of pulmonary function.

### Key words

1. Hemiplegic children
2. Scoliosis.
4. Ventilatory function.
5. Children with hemiplegic children

### Classification number

000.000.

### Pagination

84 p.

### Arabic Title Page

العلاقة بين التشنج العصبي و الجنف وكفاءة الرئة لدى أطفال الشلل النصفي.

### Library register number

5657-5658.
Background: Cerebral palsy is the most common cause of motor disability in children. Cerebral palsy cases show different types of motor disorders which include primary and secondary disorders. Primary disorders are problems that are apparent at the time of diagnosis, and secondary disorders are problems that occur over time. Aims of the study: To highlight the secondary disorders for diplegic and hemiplegic types of cerebral palsy and determine the relation between the type of cerebral palsy and the secondary disorders in children with Cerebral Palsy aged from 2 to 5 years. Subjects and Methods: Participants included 121 children with spastic CP (39 hemiplegic and 82 diplegic), Their ages ranged between 2-5 years, data of the primary disorders (muscle tone, postural stability abnormalities) were collected by using Modified Ashworth Scale, Early Clinical Assessment of Balance. and data of the secondary disorders ( strength, range of motion, endurance abnormalities ) were collected by Functional Strength Assessment, Spinal Alignment and Range Of Motion Measure and Early Activity Scale of Endurance Results: children with CP present with primary and secondary disorders, significant difference in disorder presence among the hemiplegic and diplegic groups ( P ≤ 0.05) : muscle tone in hemiplegia (1.46 ± 1.12), in diplegia(2.33± 2.18),postural stability in hemiplegia(71.06±22.81),in diplegia (45.86±18.33),strength in hemiplegia (26.15 ± 5.41), in diplegia(21.83±5.24), endurance in hemiplegia(13.9±2.73), in diplegia(12.28±2.62),range of motion in hemiplegia(4.85±2.51),in diplegia(7.85±6.62),and the result found an association between spasticity and a postural stability as a primary disorders with range of motion and force production abnormalities respectively as a secondary disorders. Conclusion: from the obtained result of this study it could be concluded that diplegic and hemiplegic cerebral palsy present with secondary disorders (ROM, strength and endurance abnormalities) but the diplegic group present with more complicated secondary disorders than hemiplegic group.

Key words
1. Cerebral palsy.
2. Secondary disorders

Classification number : 000.000.

Pagination : 92 p.

Arabic Title Page : العلاقة بين أنواع الشلل الدماغي والإعتلالات الثانويه.

Library register number : 5577-5578.
Effect of progression from hydrotherapy to land-based exercise on balance in children with cerebral palsy

Background: Cerebral palsy is a disorder of movement and posture caused by damage to the motor cortex. Hemiplegic cerebral palsy is a type of cerebral palsy that results from damage to the part (hemisphere) of the brain that controls muscle movements. The consequences of chronic muscle imbalance and the resultant deformities may be leading to increasing disability with age, that also characterized by abnormalities of motor activity, posture and balance. In cerebral palsy children, voluntary movement that should be complex, coordinated, and varied is instead uncoordinated, stereotypic, and limited. Aim of the study: This study designed to conduct the effect of progression from hydrotherapy to land based exercises and land based program on balance in hemiplegic cerebral palsy children. Subjects and Methods: Thirty children with hemiplegic cerebral palsy from both sexes (16 boys and 14 girls). Their ages ranged between 5-10 years, were assigned into two equal groups: progression from underwater to land based intervention group and land based exercises group. Balance was assessed by Biodex Balance System (over all stability index, anteroposterior stability index and Medio lateral stability index) while Growth Motor Function Measure used to assess patient motor functional improvement. Treatment program was conducted for 3 successive months/3 sessions / week. Evaluation for each child in both groups was done before, intermediate and after the conduction of treatment program. Results: The intermediate and the post treatment results of all variables in both study and control groups showed significance improvement as compared to their pretreatment values, however by comparing the results of intermediate and post treatment values in the study group with their corresponding values of the control group, the mean difference values were non-significant .Conclusion: The obtained results suggested that progression from underwater exercises therapy to land based exercise therapy is effective to improve balance in children with hemiplegic cerebral palsy.

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<th>Ahmed Ibrahim Fayed</th>
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| Supervisors             | 1. Faten Hassan Abd El Aziem  
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                          3. Mostafa El Sherbeiny |
| Degree                  | Master. |
| Year                    | 2017. |
| Abstract                | |

Key words
- Cerebral palsy
- Balance in children with cerebral palsy.
- Hydrotherapy
- Children with cerebral palsy

Classification number : 000.000.
Pagination : 76 p.
Arabic Title Page : تأثير التدرج من العلاج المائي الى التمارين البدنية على الاتزان في أطفال الشلل الدماغي.
Library register number : 5365-5366.
Background: Cerebral palsy is the most common cause of motor disability in children. Cerebral palsy cases show different types of motor disorders which include primary and secondary disorders. Primary disorders are problems that are apparent at the time of diagnosis, and secondary disorders are problems that occur over time. Aims of the study: To highlight the secondary disorders for diplegic and hemiplegic types of cerebral palsy and determine the relation between the type of cerebral palsy and the secondary disorders in children with Cerebral Palsy aged from 2 to 5 years. Subjects and Methods: Participants included 121 children with spastic CP (39 hemiplegic and 82 diplegic). Their ages ranged between 2-5 years, data of the primary disorders (muscle tone, postural stability abnormalities) were collected by using Modified Ashworth Scale, Early Clinical Assessment of Balance. and data of the secondary disorders (strength, range of motion, endurance abnormalities) were collected by Functional Strength Assessment, Spinal Alignment and Range Of Motion Measure and Early Activity Scale. Results: children with CP present with primary and secondary disorders, significant difference in disorder presence among the hemiplegic and diplegic groups (P ≤ 0.05): muscle tone in hemiplegia (1.46 ± 1.12), in diplegia(2.33± 2.18), postural stability in hemiplegia(71.06±22.81),in diplegia (45.86±18.33), strength in hemiplegia (26.15 ± 5.41), in diplegia(21.83±5.24), endurance in hemiplegia(13.9±2.73), in diplegia(12.28±2.62), range of motion in hemiplegia(4.85±2.51), in diplegia(7.85±6.62). and the result found an association between spasticity and a postural stability as a primary disorders with range of motion and force production abnormalities respectively as a secondary disorders. Conclusion: from the obtained result of this study it could be concluded that diplegic and hemiplegic cerebral palsy present with secondary disorders (ROM, strength and endurance abnormalities) but the diplegic group present with more complicated secondary disorders than hemiplegic group.

Key words

1. Cerebral palsy
2. secondary disorders

Classification number: 000.000.

Pagination: 92 p.

Arabic Title Page: العلاقة بين انواع الشلل الدماغي والاعتلالات الثانوية

Library register number: 5577-5578.
Cerebral palsy registers appear to be appropriate tools for answering questions regarding the registry and characteristics of this common childhood disability. Aim: this study was conducted to establish database about Cerebral Palsy in Sohag city. Subjects and Methods: Cerebral palsy children were be collected from departments/centers provide physical therapy and neuro pediatrics in general, health insurance and university hospital, physical therapy private centers, neuro pediatric clinics and public health center in Sohag city were involved in this study cerebral palsy children of both gender ranged in age from 3 month to 17 years. The outcome measures were Gross Motor Functional Classification System, Gross Motor Functional Measure, Manual Ability Classification System and Viking Speech Scales and its relations also recorded. Conclusion: the current study revealed that cerebral palsy children of both gender incidence of spastic type is the major while is the least prevalence ataxic type. The results revealed that CP children with level III, IV and V on Gross Motor Functional Classification System about 77.5% from cerebral palsy study sample are not actively ambulant, functional and able to communicate, also there significant relation between all cerebral palsy types and Manual Ability Classification System.

| Key words | 1. Registry  
2. Physical Therapy  
4. Cerebral palsy  
5. Children with cerebral palsy |
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<td>Arabic Title Page</td>
<td>إنشاء نموذج قاعدة بيانات العلاج الطبيعي لمرضى الشلل المخى بمدينة سوهاج.</td>
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Introduction: Spastic cerebral palsy affects the ankle joint function as a result of calf muscles hypertonia and joint stiffness, leading to a decline of the gross motor abilities. Kinesio Tape application with its various techniques is showing promising results regards increasing joint ranges of motion and inhibiting muscular spasticity. Objective: To compare between the muscle inhibitory and the functional corrective Kinesio Taping techniques on ankle range of motion, spasticity and gross motor functional abilities in children with spastic cerebral palsy. Patients and methods: the study was carried out on thirty two children with spastic cerebral palsy selected from the outpatient clinic of the Faculty of Physical Therapy Cairo University for three months, the children was on level II according to Gross Motor Function Classification System and their developmental age ranged from nine to twelve months according to Peabody Developmental Motor Scale and chronological age ranged from two to four years; angle of ankle dorsiflexion range of motion was measured using digital goniometer; Hoffman reflex to muscle response ratio was used to assess spasticity of calf muscle and Peabody Developmental Gross Motor Scale was used to assess the gross motor function. Kinesio tape was applied in two various techniques which were muscle inhibitory and functional corrective. Results: the study revealed that in both kinesio tape techniques there is an increase in the ankle range of motion, an inhibition in the calf muscle spasticity and improvement in the gross motor functional abilities, however comparing two techniques, the functional corrective was revealed to be clinically more effective than the muscle inhibitory concerning increasing ankle range of motion and inhibiting calf muscular spasticity, however there was no difference between the two techniques in the gross motor functions. Conclusion: Functional Corrective Kinesio tape technique was found to be more effective in increasing ankle range of motion and in inhibiting calf muscle spasticity than muscle inhibitory Kinesio tape technique, while no difference between both techniques in gross motor functions.

Key words
1. Muscle Inhibitory
2. Functional Corrective
3. Kinesio tape
4. Ankle
5. Cerebral palsy
6. Children With Spastic Cerebral Palsy
Background: Patient registry is a file of documents containing uniform information about individual persons, collected in a systematic and comprehensive way, in order to serve a pre-determined scientific, clinical or policy purpose. Aim; this study was conducted to establish data base for cerebral palsy in Al montazah district Alexandria city. Subjects and Methods: children with cerebral palsy who are receiving physical therapy services of both genders, ranged in age from 6 months to 15 years in central hospitals, Health insurance hospitals and all private physical therapy centers. The number of cases which included in this study was 180 cases. The outcomes measures were Viking speech Scale, Manual Ability Classification System, Gross Motor Function Classification System and Gross Motor Function Measure. Results: One hundred and eighty cases were enrolled with a prevalence of 0.4 per 1000 live births. The participants in the study, 67.22% spastic type, 8.9% dyskinetic, 8.33% ataxic and 15% hypotonic . Percentage of cerebral palsy based on GMFCS were ; Level I (6.1%), level II (22.2%), level III (35%), level IV (30.5%), and level V (5.5 %). Gross Motor Function Measure was used to determine the score of performance for each participant. According to Manual Ability Classification System high incidences of children with CP classified at level II. It was found correlations between Viking scale and cognition impairment and type of CP with associated impairments as epilepsy, cognition and speech. Conclusion: The current study revealed that incidence of spastic type was the major while ataxic type was nearly the least prevalence. According to gross motor function classification system high incidences of children with CP were classified level III.

Key words

1. Alexandria - Egypt
2. Cerebral palsy  Registry
3. Physical Therapy Registry
4. Almontazah District - Alexandria - Egypt
5. Registry of Cerebral palsy

Classification number : 000.000.
Pagination : 118 p.

Arabic Title Page : انشاءنموذج قاعدة بيانات العلاج الطبيعي لمرضى الشلل المخي بمحافظة الاسكندرية (دي أن ان) مصر.

Library register number : 5273-5274.
Background: Cerebral palsy is a common neurological disorder that requires a comprehensive assessment as well as treatment. There is shortage of data concerning the prevalence of cerebral palsy among Egyptian children. Aim: To establish registry of cerebral palsy in Alexandria (Wassat District) Egypt. Subjects: 147 children with cerebral palsy of both genders, age ranged from 6 months to 18 years participated in this study. They were selected from various hospitals and private centers as Alshatby general hospital and Nour-Alhyat charity in Alexandria (Wassat District). Methods: Gross motor function classification system expanded and revised, gross motor function measure-88, manual ability classification system and Viking scale were used for assessment. Results: Boys represented 61.2% while girls represented 38.8%. Preterm delivery represented the highest frequency, with percentage of 60.5%, while very low birth weight represented 76.9%. Spastic cerebral palsy was the most common type representing 82.31%. Moreover, spastic hemiplegic type represented 37.4%. Regarding associated impairments; epilepsy, intellectual, auditory impairments represented 22.4%, 16.3%, and 6.2% and 25.8% respectively. Optic atrophy was the most severe form of visual impairment. Conclusion: Based on the results of the study it could be concluded that, spastic type has the highest frequency among cerebral palsy cases and male population are more affected than female. Finally, children with cerebral palsy show variable degrees of gross and fine motor impairments.
Background: Anticipation (feed-forward) is crucial in movement and postural control, which is learned through trial and error. Purpose of this study: was to investigate the effect of dynamic standing frame on gross motor function in spastic diplegic cerebral palsy children. Methods: Twenty five spastic diplegic cerebral palsy children ranging in the age from two to four years participated in this study. They were divided randomly into two groups (twelve in the control group and thirteen in the study group). The control group was treated by especially designed exercise program, while the study group received the same treatment program given to the control group in addition to training on dynamic standing frame. Treatment was conducted for three successive months, at three days/week basis. Evaluation was carried out for each child individually before and after application of the treatment program. Gross Motor Function Measure was used to measure gross motor functional changes in kneeling and standing parameters. Results: No significant difference was recorded between the two groups before treatment, while significant difference was recorded between them in favor of the study group after treatment. Conclusion: According to the results of the study, it can be concluded that dynamic standing frame can be used as an additional beneficial therapeutic tool to improve gross motor function in spastic diplegic cerebral palsy children.

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<td>Effect of dynamic standing frame on gross motor function in non ambulant spastic diplegia</td>
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Key words

1. Gross motor
2. Spastic diplegia
3. Dynamic standing frame

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Arabic Title Page

تأثير إطار الوقوف المتحرك على الوظائف الحركية لذوي الشلل المزدوج التشتني الغير متنقلين.

Library register number : 5525-5526.
Purpose: The present study was conducted to investigate the efficacy of different elbow position on shoulder function after latissimus dorsi and teres major transfer in erb's palsied children.

Subjects and Methods: Thirtypost-operative erb's palsied children who had latissimus dorsi and teres major transfer received treatment program 3 times /week. Their age ranged from 3 to 6 years. Evaluation of range of motion and muscle strength was performed pre and post-operative eight weeks of rehabilitation. They were divided randomly into two groups of equal numbers; 15 patients each; the control group (A) received selected program of physical therapy exercises in the form of active gradual strengthen exercise of shoulder flexion with and extension, abduction and external rotation, gentle passive stretch of shoulder external rotation, forearm supination and pronation and wrist flexion and extension. While the study group (B) received the same program as in the control group in addition to strengthening exercises of triceps muscles. Night splint was worn after removal of cast for 2 weeks. Results: The results revealed significant improvement in range of motion in of shoulder flexion with elbow extended, abduction and external rotation in two groups after eight successive weeks, also revealed significant difference between the two groups after treatment in favor of the group (B). Conclusion: Elbow position with elbow extension had an effect on shoulder function after latissimus dorsi and teres major transfer in erb's palsied children, better than with elbow flexed.
Abstract

Background: Little is known about fetal movements; but it had shown a continuity of behavior from pre- to postnatal life. Purpose: To describe kinematically lower limb movements' continuity from fetal and neonatal stages. Study design: longitudinal prospective follow up study. Subjects: twenty-two healthy fetuses were assessed at 2nd and 3rd trimesters of pregnancy, and fifteen of them were reassessed at their first day of delivery. Methods: fetuses were scanned via four dimensional cine ultrasound devices. Neonates were captured using digital camera. Kinematic analysis was done for fetuses' and neonates' hip, knee and ankle joints' movement parameters: instantaneous angular positions, average joint ranges, joint angular velocity and movement unit duration. AutoCAD program was used to measure these angles. Results: At the 3rd trimester of pregnancy, hip and ankle joints, showed non-significant decrease of all movements' parameters pregnancy (p>0.05), while the knee joint showed significant decrease (p≤0.05). After birth there were significant increases for all joints' parameters. Conclusion: Kinematic analyses of fetal lower limb spatiotemporal parameters indicate early detection of kicking like movement, which may reflect the processes of motor development from pre- to postnatal life.

Key words

1. Fetal movements
2. kinematic analysis
3. Movement patterns
4. neonatal movement.
5. Lower Limb Movement.

Classification number : 000.000.


Library register number : 5713-5714.
Background: Calf muscle contracture is one of the most common symptoms occur in children with spastic diplegia. Sustained muscle stretch, imposed by orthotic management in rest, might be an effective method of controlling spasticity. Purpose: of this study was to compare the effect of ankle foot orthoses and knee ankle foot orthoses on calf muscle spasticity in children with spastic diplegia cerebral palsy in rest. Methods: A single blind randomized controlled trial will be performed in 19 children from both sex with spastic diplegia their age ranged from 3-5 years. The intensity of spasticity was determined by using Modified Ashworth Scale (MAS) and for the objective measurement of degree of spasticity, Hoffman reflex (H) and Hoffman reflex/motor response (H/M) ratios were used. Children were assessed before and after wearing each type of orthoses for one hour day after day. Results: showed significant changes in all measured variables as a result of wearing AFO and KAFO and there was significant decrease NHM ratio in girls compared with boys in AFO & KAFO Also results proved that KAFO was more effective than AFO. Conclusion: KAFO allowed more effect on spastic calf muscle more than AFO in rest. The KAFO orthoses provided more stretch on spastic calf muscle than AFO due to it put knee in extended position.
Background: The six-minute walk test is a reliable and valid functional test for assessing exercise tolerance and endurance. Objectives: The purposes of this study were to provide reference values of six-minute walk test for Lower-Egypt children (Cairo, El Beheira and Ismailia) aged from 6 to 11 years old and to compare between girls and boys regarding the standard values of the six-minute walk test. Methods: 900 Egyptian healthy children of both sexes participated in this study. They were recruited from different local primary schools located in three governorates in the Lower Egypt (Cairo, El-Beheira and Ismailia) on the basis of 300 children from each governorate. They were classified according to age into five groups with 180 children in each age group. The six-minute walk distance was measured for each child. Results: The overall mean of the six-minute walk distance was 589.79±4.68 meters. It was increased with age increment reaching to maximum value of 626.53 and 659.08 meters for girls and boys respectively at 10 years old. The results revealed a significant differences between girls and boys only after the age of 9 years. Conclusion: This study provided reference values of the six-minute walk test for healthy Egyptian children aged from 6-11 years which were affected by age and gender.
The purpose of this study was to investigate the effect of vestibular stimulation on balance in children with hemiparetic cerebral palsy. Subjects: Thirty children of both sexes participated in this study. Their age ranged from 5 to 8 years. Methods: Children were assigned into two groups of equal number, 15 children in each group. Group A (control group) received traditional physical therapy program and group B (study group) received the same program as in group A in addition to vestibular stimulation. Biodex Balance system was used to assess the children’s ability to maintain dynamic postural stability in the two groups before and after two months of treatment. Results: No significant difference in ODSI, MLSI, and APSI was recorded between the two groups before treatment, while significant improvement in ODSI, MLSI, and APSI was obtained in each group after treatment. Significant differences in ODSI, MLSI, and APSI were observed between the two groups after treatment in favor of group B. Conclusion: From the results of the present study, it can be concluded that the vestibular stimulation can be of value in improving balance in children with hemiparetic cerebral palsy.
Background: Dyslipidemias are disorders of lipoprotein metabolism resulting in abnormal excesses of total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), or triglycerides, or deficiency of high-density lipoprotein cholesterol (HDL-C). Dyslipidemia is an established risk factor for coronary heart disease (CHD) the leading cause of death for adults.

Purpose: To compare the effect of aerobic training versus resisted exercise on hyperlipidemia in obese children.

Methods: Thirty obese children of both sexes with ages ranging from 14 to 17 years and suffering from hyperlipidemia and selected from Pediatrics, Internal and Physical Therapy Out Clinic of Zagazig General Hospital. Children were randomly assigned into two groups (A&B) of equal numbers; each group consisted of fifteen children. Parameters measured from both groups regarding body weight, body mass index (BMI), waist circumference, height, total cholesterol, triglycerides, LDL-c and HDL-c levels. These parameters were measured before initiation and following the treatment program, there were statistically analyzed and compared.

Group (A) as 15 children (6 girls and 9 boys) performed aerobic training with balanced diet for 12 weeks. Their mean ± SD age, weight, height, and BMI were 15.93 ± 1.09 years, 83.66 ± 8.12 kg, 161.93 ± 5.24 cm, and 31.77 ± 1.52 kg/m² respectively. Group (B) as (8 girls and 7 boys) performed resisted exercises with balanced diet for 12 weeks. Their mean ± SD age, weight, height, and BMI were 15.6 ± 1.12 years, 88.06 ± 10.7 kg, 162.93 ± 5.24 cm, and 31.77 ± 1.52 kg/m² respectively.

Results: In response to the two types of protocols aerobic training and resisted exercise showed a significant increase in the post treatment mean value of HDL-c compared to pretreatment value (p<0.05) with the favor for resisted exercise group. The post treatment mean values of TC, TG and LDL-c of both groups significantly decreased compared with pretreatment mean values (p<0.05) with favor for aerobic training group.

Conclusion: using aerobic training or resisted exercises provides a safe, with minimal side effects and an effective approach in treatment of hyperlipidemia in obese children. Aerobic training has high significant improvement on all lipid profile with more improvement in TC, TG, and LDL than resisted exercises, while resisted exercises had high significant improvement on all lipid profiles with more improvement in HDL than aerobic training.
Respiratory distress syndrome is an acute lung disease present at birth which usually affects premature babies. Reflex rolling is tactile stimulation technique used to improve respiration. The purpose of the study was to investigate efficacy of reflex rolling on incubation period in preterms with respiratory distress syndrome. Thirty seven preterm neonates participated in the study, their gestational ages ranged from 30-36 weeks. They were divided into two groups. Group (A); the control group which received medical treatment and conventional chest physical therapy program and Group (B); the study group which received the same medical treatment and conventional chest physical therapy program in addition to reflex rolling technique. The physiotherapy sessions were conducted for 6 days per week until discharge. Duration of ventilation and incubation period were measured. The results showed significant reduction among the study group compared to control group regarding the duration of ventilation as well as incubation period. From the obtained results, it could be concluded that reflex rolling technique was of value in minimizing the duration of the management of preterm babies with respiratory distress syndrome.
**Background:**
Brain and spinal cord tumors are the second most common cancers in children after leukemia. They account for about 1 out of 4 childhood cancers. More than 4,000 central nervous system tumors are diagnosed each year in children and teens. It has been reported that those children have easy fatigability. 

**Objective:**
This study was conducted to investigate the effectiveness of hydrotherapy on performance in Children with brain tumor.

**Methods:**
Fifty children of both sexes participated in this study. They were selected from Children's Cancer Hospital Foundation 57357, Cairo. The inclusion criteria were: Their ages between 5-12 years old, have affection of motor function and muscle weakness of upper and lower limbs, selected after the start of treatment by at least one month. We assess muscle strength of upper and lower limb muscles, quality of life and cardiorespiratory fitness. They were classified randomly into two groups; the control group received land-based exercise program for such cases, and the study group received hydrotherapy besides the land-based exercise program.

**Results:**
There were significant improvement in muscle strength and quality of life in both groups in favor of the study group.

**Conclusion:**
From the obtained outcome, it can be concluded that hydrotherapy can be added to the regular physical therapy program to improve performance in children with brain tumor.

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<td>Abstract</td>
<td>Background: Brain and spinal cord tumors are the second most common cancers in children after leukemia. They account for about 1 out of 4 childhood cancers. More than 4,000 central nervous system tumors are diagnosed each year in children and teens. It has been reported that those children have easy fatigability. Objective: This study was conducted to investigate the effectiveness of hydrotherapy on performance in Children with brain tumor. Methods: Fifty children of both sexes participated in this study. They were selected from Children's Cancer Hospital Foundation 57357, Cairo. The inclusion criteria were: Their ages between 5-12 years old, have affection of motor function and muscle weakness of upper and lower limbs, selected after the start of treatment by at least one month. We assess muscle strength of upper and lower limb muscles, quality of life and cardiorespiratory fitness. They were classified randomly into two groups; the control group received land-based exercise program for such cases, and the study group received hydrotherapy besides the land-based exercise program. Results: There were significant improvement in muscle strength and quality of life in both groups in favor of the study group. Conclusion: From the obtained outcome, it can be concluded that hydrotherapy can be added to the regular physical therapy program to improve performance in children with brain tumor.</td>
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<td>Key words</td>
<td>1. Hydrotherapy</td>
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<td>2. Performance</td>
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<td>3. Children with Brain Tumor</td>
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<td>Arabic Title Page</td>
<td>تأثير المعالجة المائية على الأداء في الأطفال المصابين بورم الدماغ.</td>
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### Abstract

**Background:** Cerebral palsy (CP) is a permanent non progressive brain lesion accompanied by disturbances of sensation, perception, cognition, communication, behavior and secondary musculoskeletal problems. Aim of this systematic review: to systematic review the effect of visual feedback on motor abilities in children with spastic CP. Methods: A search was made in databases Pubmed, Cochrane and Pedro from August 2015 to December 2016 and in International Journal of Physiotherapy from February 2017 to March 2017. The inclusion criteria were: published randomized controlled trials (RCT), studies including children ranging in age from 2 to 18 years old with spastic cerebral palsy, studies which demonstrated the effect of visual feedback including mirror visual feedback, video clips and action observation therapy. The outcome measures were balance, gait and hand function. Two independent reviewers assessed the methodological quality and extracted data of included studies. Results: A total number of 246 records, 96 of them were duplicated, 105 of them were excluded after screened the title and abstract, 45 were retrieved by the electronic searches, 38 of them were excluded after reading the full article, only 7 articles were met the inclusion criteria underwent quality appraisal. The existing data weren’t homogenous. Thus the current studies were analyzed using descriptive analysis Conclusion: The level of evidence to support the effectiveness of visual feedback in children with spastic CP remains weak due to minimum number of the randomized control trials, minimum number of the participants in the included studies and visual feedback has different methods and all studies didn’t use the same method.

### Key words

1. Systematic review
2. video clips
3. motor skills
4. balance
5. hand function and gait
6. RCT
7. visual feedback
8. spastic cerebral palsy
9. action observation,
10. mirror visual feedback
11. children with spastic cerebral palsy

### Classification number

000.000.

### Pagination

98 p.

### Arabic Title Page

تأثير التغذية المرجعية البصرية على القدرات الحركية عند الأطفال المصابين بالشلل الدماغي التشنجي: دراسة منهجية.

### Library register number

5407-5408.
Background: Cerebral palsy (CP) is the most common neurodevelopmental motor disability in children. There is a lack of information concerning the predominance of cerebral palsy among Egyptian children. Cerebral palsy registry appears to be appropriate tools for answering questions regarding the prevalence and the attributes of the disorder. Aim: To establish registry of cerebral palsy in North Cairo, Egypt. Subjects and Methods: One hundred and eighty four children with cerebral palsy of both genders, ranging in age from 3 months to 18 years participated in this study. They were selected from hospitals and private centers in North Cairo. Gross Motor Function Classification System (GMFCS), Gross Motor Function measure (GMFM), Manual Ability Classification System (MACS) and Viking Speech Scale (VSS) were used for assessment. Results: the results revealed that boy/girl ratio was 1.3/1. Spastic CP was the most common type representing 90.3%. Moreover, spastic quadriplegic type was the most common type with high incidence of quadriplegia. In addition, hypoxia was the most common cause of cerebral palsy.

Classification number: 000.000.

Pagination: 133 p.
Back ground: Many children who sustain birth injuries to the brachial plexus suffer significant functional limitations due to various sequelae affecting the shoulder, elbow, forearm and hand. 

Aim: To investigate the effect of home based treatment program evaluated by the electroneurography of the affected arm in Erbs' palsy children. Subjects and methods: Thirty children with Erbs' palsy from both gender ranging in age from 6 to 12 months were assigned into two groups of equal number. The control group (group A) received selected physical therapy program, and the study group (group B) received home based program in addition to the same selected physical therapy program as in group (A). Percent of degeneration using EMG was recorded from biceps muscles before and after the treatment program. Results: The results revealed no significant difference when comparing the pretreatment mean values of the two groups (study& control), while a significant difference was recorded between the two groups after treatment in favour of the study group. Conclusion: The result of the study suggests that home based program has positive effect in the treatment of Erbs' palsy in infants.

| Key words                                      | 1. Erbs' palsy birth injury                           |
|                                              | 2. Home based program                                  |
|                                              | 3. Electroneurography                                   |
|                                              | 4. Biceps percentage of degeneration                    |
|                                              | 5. muscle activity                                     |
|                                              | 6. Children in Erbs' palsy                             |

| Classification number | : 000.000. |

Back ground: تأثير برنامج التمارين المنزلية على نشاط العضلات في الأطفال المصابين بالшибال الإيرابي.
Background: Obesity represents one of the most global health problems affecting people of all ages at all socio-economic status levels. It has deleterious effect on respiratory system. Purposes of the study: to compare between actual and predicted mean value of the selected ventilatory function's variables which are vital capacity (VC), forced vital capacity (FVC), forced expiratory volume in the first second (FEV₁), forced expiratory volume in the first second ratio (FEV₁%), and peak expiratory flow rate (PEFR) in normal weight, overweight and obese boys at 10-11, 11-12 and 12-13 years old and to investigate correlation between BMI and actual mean value of pulmonary function test variables in normal weight, overweight and obese boys at the three aged groups. Subjects and Methods: Two hundred and forty boys with age ranged from 10 to 13 years old participated in this study. They were classified according to BMI into normal weight, overweight and obese and each group contain (20 boys normal weight, 30 boys overweight and 30 boys obese). Selected ventilatory function's variables for all boys were measured by spirometer. The study was conducted from January to April, 2016. Results: In normal weight boys, at age of 10 to 11 years, there was significant decrease in actual mean value of VC, FVC and PEFR. At age of 11 to 12 years, there was significant decrease in actual mean value of VC, FVC, FEV₁ and PEFR. At age of 12 to 13 years, there was significant decrease in actual mean value of FVC and PEFR but significant increase in actual mean value of FEV₁%. In overweight boys, at age of 10 to 11 and 12 to 13 years, there was significant decrease in actual mean value of VC, FVC, FEV₁ and PEFR. At age of 11 to 12 years, there was significant decrease in actual mean value of VC, FVC, FEV₁ and PEFR and also significant increase in actual mean value of FEV₁%. In obese boys, at age of 10 to 11 and 12 to 13 years, there was significant decrease in actual mean value of VC, FVC and PEFR. At age of 11 to 12 years, there was significant decrease in actual mean value of VC, FVC, FEV₁ and PEFR. Results also showed that, in normal weight boys, at age of 10 to 11 and 11 to 12 years, there was significant positive correlation between BMI and VC. In overweight boys, at age of 11 to 12 and 12 to 13 years, there was significant positive correlation between BMI and VC. In obese boys, at age of 12 to 13 years, there was significant positive correlation between BMI and VC. Conclusion: The obtained results suggested that there was positive correlation between body mass index and VC, FVC, FEV₁ and PEFR for aged groups.

**Key words**

1. Ventilatory functions
2. spirometer
3. normal weight boys
4. overweight boys
5. obese boys
6. Body Mass Index

**Classification number**: 000.000.

**Pagination**: 114 p.

**Arabic Title Page**: العلاقة بين معدل كتلة الجسم وزوائفة الرئة لدى الأطفال البديناء.

**Library register number**: 5345-5346.
### Abstract

Background: Increasing amount of time that people spend using computers, playing video games and watching television is a major factor in rising rates of obesity. Children who were heavily engaged in social networking have an increased chance of developing anxiety issues and antisocial personality disorder. Aerobic exercises have positive effects on self-esteem, self-confidence and behavior in children and youth. The aim of work was to study the effect of aerobic exercise on introvert overweight children. Subjects and Methods: One hundred introvert overweight boys were chosen from private preparatory school by introversion scale and Body Mass Index. Quasi-experimental design was used in this study. Their ages ranged from 13-15 years. Treatment program was one hour; composed of 30 minutes of group therapy exercises, 15 minutes of treadmill and 15 minutes of bicycle for 3 sessions per week extended for three months, which performed for children and measured introversion characteristic and weight after it.

Results: Data shows that after 3 months of treatment with aerobic exercises there was improvement in both introversion and overweight(83%), improvement in only introversion(5%), improvement only in overweight(8%) and there is no improvement in(4%) of sample. Conclusion: Aerobic exercises showed significant statically and clinically improvement in both introversion and weight at introverted overweight children.

### Key words

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### Classification number

000.000.

### Pagination

101 p.

### Arabic Title Page

تأثير التمرينات الهوائية على الأطفال المنطوين ذوي الوزن الزائد الذين يستخدمون التكنولوجيا الحديثة.

### Library register number

5537-5538.
Objective: the aim of this work was to compare between the effect of low level laser therapy and Kinesio tape on pain, muscle power, hand function and range of motion in post cast forearm fracture in children. Methods: Thirty children (17 boys and 13 girls) participated in this study, they had fracture at middle third or lower third of forearm bones, their ages ranged between seven and nine years. They were randomly assigned into two groups, both groups were treated by a selected physical therapy program; in addition Group A received laser therapy, while group B treated with Kinesio tape for four weeks. The evaluation included hand grip strength by pneumatic squeeze bulb hand dynamometer, pain by Wong-Baker FACES pain rating scale, range of motion detected by universal goniometer and hand function by Sollerman hand function Test were conducted before and after four weeks of treatment in both groups. Results: there was a statistical significant difference between both groups after treatment program. Pain reduction was more in group A than group B, while muscle power, hand function, and range of motion improved in group B more than group A in children with forearm fracture after cast removal, p < 0.05. Conclusion: using low level laser therapy has better effect on pain reduction, while using Kinesio Tape has a better effect on improving muscle power, hand function, range of motion.

| Key words | 1. Children forearm fracture  
2. Low level laser therapy  
3. Kinesio Tape  
4. Hand function  
5. Pain. |
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<td>86 p.</td>
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Arabic Title Page: دراسة مقارنة بين تأثير الليزر منخفض الشدة والشرريط اللاصق على وظائف اليد بعد الكسر في عظام الساعد عند الأطفال.

Library register number: 5563-5564.
Background: Assessment of postural reactions provides important information for clinical decision-making in pediatric physical therapy and selection of appropriate treatment goals, suggestion and strategy. Objective: This study was conducted to describe postural reactions from sitting and standing positions through measuring the angles of neck, trunk, upper and lower limbs in normal infants at different ages using video motion analysis. Methods: Two hundred infants from both sexes, aged from 6 – 18 months, were selected from nurseries and day care centers to participate in this study. They were categorized into two main groups (I & II) according to their ages. Group I aged from 6 – 10 months and then subdivided into two subgroups: subgroup Ia aged from 6 – < 8 months and subgroup Ib aged from 8 - 10 months. Group II aged from 12 – 18 months and then subdivided into two subgroups: subgroup IIa aged from 12 – < 15 months while subgroup IIb aged from 15 – 18 months. Postural reactions were evaluated from sitting position for all infants in group I and from standing position for all infants in group II. Head righting angle, trunk righting angle, Rt. and Lt. shoulder angular displacement were measured for all infants in both groups I and II using Kinovea computer program. Moreover, Rt. and Lt. hip angular displacement were measured for all infants in group II. Results: Statistically significant differences were found between groups (I&II) and between subgroups (Ia&Ib) regarding head righting angle, trunk righting angle, Rt. and Lt. shoulder angular displacement (P< 0.05). Comparison between subgroups(IIa&IIb) showed a significant difference of Rt. and Lt. shoulder angular displacement, Rt. and Lt. hip angular displacement (P< 0.05), while there was no significant difference of head righting angle and trunk righting angle between subgroup IIa and subgroup IIb (P=0.254, P=0.752 respectively). Conclusion: It can be concluded that variability of postural reactions decreases with age.

Key words
1. Infants .
2. Postural reactions
3. Motor development
4. Motion analysis
5. normal infants.

Classification number : 000.000.
Pagination : Xi, 104 p.
Arabic Title Page : التحليل الحركي لردود الأفعال الوضعية عند الأطفال الرضع.
Library register number : 5289-5290.
**Abstract**

Background: Footwear modifications and foot insoles are often prescribed in the management of foot disorders. Different foot insoles and orthosis are used in subjects with flatfeet. Aim: To investigate the effect of different foot insoles on dynamic balance in children with flatfeet. Subjects and Instrumentation: Forty children with flatfeet from both sexes, age ranged from 6-10 years participated in this study. They were selected from El-Fayoum governorate schools. They were classified randomly into two groups of equal numbers. Dynamic balance was assessed twice by the Biodex balance system with and without foot insoles. The first assessment was conducted for all children with barefeet. During the second assessment children in first group (superfeet insole group) used superfeet insole while those in the second group (postural insole group) used postural insole. Results: Superfeet group showed statistically significant improvement of stability indexes. However, non-significant improvement was observed in postural insole group. Moreover, comparing mean values of stability indexes of the second assessment showed no significant difference between both groups. Conclusion: Superfeet insole may improve dynamic balance. However, further studies are recommended for comparing effect of different types and materials of foot insoles on dynamic balance.

**Key words**

1. Flat feet  
2. Biodex balance system  
3. Tinnitus  
4. Vertigo  
5. Otorrhoea  
6. Foot insoles  
7. Dynamic balance  
8. Children with Flatfeet  
9. Postural Stability

**Classification number**: 000.000.

**Pagination**: 87 p.

**Arabic Title Page**: تأثير أنواع فرش القدم المختلفة على ثبات القوام في أطفال التفتوح القدمي.

**Library register number**: 5361-5362.
Background: Improving balance in children with cerebral palsy has been a primary goal of physical therapy. Proprioceptive training exercises are a promising therapy aiming to improve balance in those children. Aim: The study intended to investigate the effect of intensive proprioceptive stimulation program in improving dynamic balance in children with spastic diplegia. Materials and methods: Twenty children with spastic diplegia from both genders participated in this study. Their age ranged from 5-8 years. They were selected from outpatient clinic, Faculty of Physical Therapy, Cairo University and from Dr/ kamalShoukry’s pediatric rehabilitation center. They were classified randomly into two groups of equal numbers; control and study groups. Control group received a designed physical therapy program for one hour in addition to one hour of proprioceptive training, 3 days/week for 3 successive months. While the study group received the same designed physical therapy program as control group in addition to an intensive proprioceptive training for 3 hours, 5 days/week for 3 successive months. Modified Ashworth scale and gross motor function classification system-expanded and revised were used for sample selection. While dynamic balance was assessed by the Biodex balance system (Biodex medical system, Shirly, New York). Results: Both groups showed a statistically significant improvement of the stability indexes, but in favor of the study group. Conclusion: Intensive proprioceptive stimulation program in conjunction with a designed rehabilitation program significantly improve dynamic balance in children with spastic diplegia.

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<th>Key words</th>
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<td>2. dynamic balance</td>
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<td>4. cerebral palsy</td>
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<td>Arabic Title Page</td>
<td>: تأثير برنامج التدريبات المستقبلات الحسية الداخلية المكثف على الاتزان الديناميكي عند الأطفال المصابين بالشلل التقلصي المزدوج.</td>
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<td>: 5555-5556.</td>
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**Purpose:** The study was conducted to investigate the prevalence and clinical prediction rules for substantial overuse sports injuries among children and adolescent karate players. Subjects & Methods: A cross sectional study conducted with fifty nine children and adolescent karate players ranged in age from 8 to 18 years, from port-said private and public clubs and karate schools of both sexes (45 boys and 14 girls) were enrolled in this study. With training experience in karate at least 3 years. and training intensity at least 3 hours/week, and their belt ranks were between (orange-black).Sports injury questionnaire and Oslo sport trauma research center overuse injury questionnaire (OSTRC) were used to collect the data. The study was conducted from April 2015 to February 2016. Results: The results revealed that 39% of athletes sustained at least one injury per year which were localized mainly in lower limbs, there is no clinical prediction rules for injury/year. Every factor (age, training age, sex, rank, style, training dosage/week, training time/day) was insignificant as predictor. Overuse injuries had been investigated in hip, knee, ankle joints; 75% of the players complained at least one overuse injury most of them in hip joint, there is no clinical prediction rules for hip, knee and ankle joints overuse injury. Conclusion: It could be concluded that injuries among children and adolescent karate players is common in karate players specially overuse injuries. There is no clinical prediction rules for hip, knee and ankle joints overuse injury and injury/year.

**Key words**

1. Overuse Injuries
2. Karate Sports.
3. Clinical Prediction Rules
4. Sports Injuries among Children
5. Sports Injuries among Adolescent
6. Substantial Overuse
7. Children with Sports Injuries
8. Adolescent with Sports Injuries

**Classification number**: 000.000.

**Pagination**: 101 p.

**Arabic Title Page**: إنتشر إصابات الاستخدام المفرط وقواعد التنظيم الطبي بين الأطفال والمراهقين الرياضيين.

**Library register number**: 5381-5382.
Introduction: The increasing prevalence of childhood obesity has become a growing matter of public health concern worldwide. Obesity in childhood has significant impact on both physical and psychological health; overweight and obesity are associated with hyperlipidemia, Hypertension, abnormal glucose tolerance, and infertility. In Addition, psychological disorders such as depression occur with an increased frequency in obese children. Aim of the study: To determine prevalence of obesity in primary school children in Al Minia Governorate.

Material and methods: a cross-sectional study was carried out on 1000 out of 70000 Egyptian children to find prevalence of overweight and obesity among primary school children at age of 6–12 years. Nine schools from nine districts in Al Minia Governorate including both sexes were selected randomly in this study. Data were collected in form of anthropometric measurements (weight, height, waist circumference, and body mass index. Results: the prevalence of overweight and obesity is relatively high 429 (42.9%) distributed as 227(22.7%) overweight, 202(20.2%) obese, underweight 15(105%), healthy 556(55.6%). And the major risk factors was lack of physical activities and usage of fast food, increasing hours watching TV, and family history play important role. Conclusion: This study provides evidence of the increasingly high burden of overweight and obesity among primary school children living El Minia governorate in Egypt.

Key words

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Classification number : 000.000.

Pagination : 71 p.

Arabic Title Page : إحصائية عن انتشار السمنة بين أطفال المرحلة الابتدائية في محافظة المنيا.

Library register number : 5571-5572.
Back ground: Cerebral palsy (CP) is one of the most common causes of childhood physical disabilities. The prevalence rate of CP in developing countries is high.

**Purpose**: To determine the prevalence of cerebral palsy in Damanhur at Elbehera Governorate. Subjects and Methods: One hundred sixty one children with CP receiving physical therapy services of both genders participated in this study. Their ages ranged from one month up to 14 years. They were recruited from two public hospitals, one private hospital and five private centers in Damanhur. They were subjected to modified Australian Registry Form. Results: within study population the results revealed that the prevalence of CP children who received physical therapy services was 0.8/ 1000 live birth in Damanhur. Boys and girls represented 39.1% and 60.9% respectively from total cases. Governmental hospital, private hospital and home represented 51.6,46.6 and 1.9 respectively. The percentage of CP types was spastic 88.2%, hypotonic 5%, dyskinetic 4.9% and ataxic 1.9%. The results of Gross Motor Function Classification System (GMFCS) and Manual Ability Classification System .level IV and level V respectively had the highest percentages. and the results of Gross Motor Function Measure (GMFM) represented that less than one hundred was 46.6% from all percentages. Conclusion: Prevalence of CP in Damanhur city is high. Spastic type is the highest percentage while ataxic type is the least percentage of total cases. Based on GMFCS, MACS and GMFM, most of patients were severe cases. 5369-5370

**Key words**

1. Cerebral Palsy in Children
3. prevalence
4. GMFCS
5. MACS
6. GMFM
7. Children with Cerebral Palsy

**Classification number**: 000.000.

**Pagination**: 122 p.

**Arabic Title Page**: انتشار حالات الشلل الدماغي في مدينة دمياط-البحيرة.

**Library register number**: 5369-5370.
The purpose of this study was to investigate the effect of neuromuscular electrical stimulation of abdominal and back muscles on balance in children with spastic diplegia. Thirty spastic diplegic C.P. children of both sexes were selected from the out-patient clinic, Faculty of Physical Therapy, Cairo University and Police Hospital. They were assigned randomly into two groups of equal number, (A&B); Group (A) represented the control group; children in this group received regular physical therapy program based on neurodevelopmental approach used for rehabilitation of such patients. Group (B) represented the study group; they received the same regular physical therapy program applied on the control group in addition to 30 min neuromuscular electrical stimulation of abdominal and back muscles. The rehabilitation program was conducted for both groups three times per week over a period of six successive weeks. Both groups were evaluated using Biodex stability system and GMFM before starting physical therapy program and after 6 weeks of treatment. The results of this study revealed no statistically significant difference between the two groups before treatment while after 6 weeks of treatment there was significant difference in overall stability index, mediolateral stability index and anteroposterior stability index. The significant difference between the two groups after 6 weeks of treatment was in favor to the study group. The results also revealed significance difference in GMFM after 6 weeks of treatment in both groups with no significance difference between the two groups. It can be suggested that adding neuromuscular electrical stimulation of abdominal and back muscles to the physical therapy program can improve balance in children with spastic diplegia.

### Key words

1. Balance  
2. Neuromuscular electrical stimulation  
3. Spastic Diplegia  
4. Children with Spastic Diplegia

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<td>Arabic Title Page</td>
<td>تأثير التنبية الكهربائي لعضلات البطن والظهر على الاتزان في الأطفال المصابين بالشلل التقلصي المزدوج.</td>
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<td>Library register number</td>
<td>5585-5586.</td>
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Objective: The aim of this systematic review was to examine the literature on the effectiveness of conductive education on motor functions in children with cerebral palsy. Subjects and Methods: Search was made on children with cerebral palsy (hemiplegia or diplegia), aged between 1 and 16 years. Children with severe visual or hearing impairment and children who had low mentality were excluded. Search was made in Pubmed, Pedro, Cochrane and google scholar web site up to May 2017. The intervention used was Conductive Education as a group programs. The current researches included four studies and descriptive analysis was conducted due to heterogeneity. Outcomes effect of Conductive Education on the primary outcomes was motor functions and secondary outcomes was the activities of daily living. Results: Conductive Education had a significant effect on motor functions (gross and fine) and the activities of daily living in children with cerebral palsy with maintenance of this effect for a long period of time. Conclusion: The current level of evidence remains weak although it supports the effectiveness of conductive education for improving motor functions in children with cerebral palsy. However, no superiority came from using it when compared with intensive therapy programs.
Background: This study was performed in order to investigate the effect of quadruped position in form of prolonged stretch on spasticity in children with spastic hemiplegia by using different assessment methods. Purpose: of this study was to determine the effect of quadruped position on spasticity and to determine the time needed to control spasticity by quadruped position in children with spastic hemiplegia. Methods: A total of thirty five children diagnosed as spastic hemiplegia participated in this study. Their ages were 4-8 years. The degree of spasticity was determined by using Modified Ashworth Scale (MAS). For the objective measurement degree of spasticity, Hoffman reflex (H) and Hoffman reflex/motor response (H/M) ratios was used, the time was determined by using EMG. H/M ratio measured before and after quadruped position, and the time evaluated during children placed in quadruped position. Results: the decrease in H/M ratios, MAS values were found statistically significant after quadruped positioning, and the inhibition time of upper limb was $10.31 \pm 2.48$ minutes, with maximum value of 15 minutes and minimum value of 6 minutes and the inhibition time of lower limb was $13.13 \pm 2.09$ minutes, with maximum value of 16 minutes and minimum value of 9 minutes Conclusion: Our study supports that the effect of quadruped positioning in controlling spasticity can be used with neurodevelopmental treatment approaches when it is required. Quadruped positioning may help exercises to be performed more easily, and to prevent muscle contractures and joint limitation in children with spastic hemiplegia.

**Key words**
1. Quadruped position
2. Spastic hemiplegia
3. Prolonged stretch
4. Children With Hemiplegia

**Classification number**: 000.000.

**Pagination**: p.

Arabic Title Page: الوقت المناسب للشذ المستمر للعضلات للسيطرة على تشنج العضلات للأطفال المصابين بصرع نفسي.

Library register number: 5313-5314.
Background: Respiratory problem in premature infants are the major causes of their morbidity and mortality, and they often use the expiratory breath hold more than term infants. Purpose: To evaluate the effect of stimulation of the abdominal muscles on weight and the arterial blood gases of preterm infants with collapsed lung. Subject and procedures: 45 preterm infants with lung collapse were not under mechanical ventilation. They were randomly assigned into three groups with equal number, group A received chest physiotherapy modalities (percussion vibration) plus medical treatment and group B received chest physiotherapy modalities in addition to stimulation to abdominal muscles using faradic stimulation plus medical treatment. Faradic stimulation was applied to rectus abdominals and external obliques abdominal muscles for 10 minutes twice time daily. Weight and arterial blood gases (Po2, Paco2, PH, and Hco3) were monitored before and after four weeks of treatment application. Group C control group. Results: when the mean values of measured variable of both groups compared before and after treatment, there was significant difference within and between groups (P ≤0.001). Conclusion: Finally the abdominal stimulation may assist the effect of chest physiotherapy on pulmonary function in preterm infant with significant effect of the chest physiotherapy program in improving respiration and decrease lung collapse.

Key words
1. Preterm infant
2. Chest Physiotherapy
3. faradic Stimulation
4. Lung Collapse
5. pulmonary functions
6. infants with collapsed lung

Classification number : 000.000.

Pagination : 93 p.

Arabic Title Page : تحسين الوظائف الرئوية في الأطفال المبتسرين المصابين بالاسترواح الصدري من خلال استخدام الكهرباء الفاردي.

Library register number : 5451-5452.
# Relation Between Increased Body Mass Index And Static Foot Posture In Children With Down Syndrome

**Abstract**

Background: Children with Down syndrome have higher prevalence of over-weight and obesity when compared to those without DS. They have problems with collagen, which is the major protein that makes up ligaments, tendons, cartilage and bones. This creates significant laxity from the feet up. The combination of this ligamentous laxity and low muscle tone contribute to orthopedic problems in them. Purpose: To identify the correlation between increasing the body mass index and the static foot posture in children with DS. Subjects & Methods: The study was conducted on 144 children with DS (both sexes). They were selected from the public schools and institutes of special needs at big cities. Their ages ranged from 10 to 18 years old. Their sex distribution revealed that there were 66 girls and 78 boys. The weight status of the study group revealed that there were 42 healthy weights, 33 of overweight and 69 obese children. After weight and height was measured and the BMI was calculated, assessment of the foot posture was conducted by the foot posture index-6. Results: the study indicates that increased BMI has a negative weak correlation \( r = -0.08, p = 0.33 \) to the value of foot posture index-6 of right foot and also negative weak correlation \( r = -0.06, p = 0.46 \) to the value of foot posture index-6 of left foot. Conclusion: Based on the findings of this study, it could be concluded that there was a weak negative non-significant correlation between increased body mass index and static foot posture in children with DS. Most of children with DS have pronated feet regardless their body mass index. Flat foot was more common in boys than girls with DS.

**Key words**

1. Down syndrome
2. Body Mass Index.
3. Foot Posture.
4. Children With Down Syndrome

**Classification number**

: 000.000.

**Pagination**

: 103 p.

**Arabic Title Page**

: العلاقة بين الزيادة في معامل كتلة الجسم ووضع القدم أثناء الثبات لدى الأطفال المصابين بمتلازمة داون.

**Library register number**

: 5413-5414.
Abstract

The cerebral palsy register is research information developed to facilitate the study of the distribution, prevalence and severity of cerebral palsy, the etiology and determinants of cerebral palsy. Purpose: To establish data base about cerebral palsy in Mit-Ghamer city. Subject and methods: one hundred thirty two cerebral palsy children receiving physical therapy of both genders participated in the study and age ranged from 6 month to 15 years. All cerebral palsy children are from Mit-Ghamer and its villages. Cerebral palsy children collected from hospitals and private centers. Gross Motor Function Classification System Expanded and Revised (GMFCS-ER); Gross Motor Function Measure (GMFM), Manual Ability Classification System (MACS) and Viking Speech Scale (VSS) were used in assessment of cases. Results: Spastic children represented 79.5%, hypotonic children represented 12.1%, dyskinetic children represented 4.5% and ataxic children represented 3.8% of total cerebral palsy cases. Results from GMFCS, GMFM, MACS and VSS were recorded. Conclusion: Spastic type has the highest frequency among cases and spastic quadriplegia is the most common type. According to GMFCS; Level 5 have the highest percentage, this means that the severity of the cases were high. The CP register aim to measure effectiveness of prevention methods and to assist set up and evaluate health services.

Key words

1. Cerebral Palsy Registry
2. Mit-Ghamer city - Egypt
3. Registry of Cerebral Palsy

Classification number : 000.000.
Arabic Title Page : تسجيل مرضى الشلل الدماغي في مدينة ميت غمر - مصر.
Library register number : 5267-5268.
Background: Decrease in endurance in children is one of the challenging complications of diabetes mellitus. Purpose: to evaluate the effect of aerobic exercise on the endurance in children with type I diabetes mellitus. Subjects and methods: Thirty patients with type I diabetes mellitus from both sexes ranged from 8 to 11 years old. They were selected from Police Hospital at Nasr City. The study started in January 2016 to December 2016. the patients were divided randomly into control and study groups. Both groups were evaluated pre and post treatment by ADIVA 120 for blood glucose level (fasting blood glucose and post prandial blood glucose) and treadmill to evaluate endurance (distance & time). Treatment time was 40 minutes / 3 sessions per week/3 successive months. Control group received program as muscle strengthening exercise and study group received same regimen in addition to treadmill as a form of aerobic exercise. Results; Children in both groups were homogenous in the measured variables; fasting blood glucose, post prandial blood glucose, distance and time in pre-treatment. While comparison between pre and post treatment results for both groups the results showed significant improvement in all measured variable post treatment. Compare the post treatment results for control and study group the results showed significant improvement in the favor of study group. Conclusion: Aerobic exercise must add as a part of treatment program to improve the endurance of children with type I diabetes mellitus.

### Key words

1. Diabetes mellitus
2. Endurance
3. Aerobic exercise on Endurance
4. Children with Type I Diabetes Mellitus.

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<td>: تأثير التمارين الرياضية على قوة تحمل الطفل مريض سكر الدم (1).</td>
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The purpose of the study was to detect the effectiveness of diet and exercises on plaque psoriatic children. Thirty children with plaque psoriasis from both sexes ranging in age from 11 to 18 participated in this study. They were assigned randomly into two group A and B of equal number 15 patient each, where group A received diet program and group B received both diet and exercise program. All children were evaluated before and after treatment program and for each group, All treatment was conducted for three month. Evaluation of the psoriasis severity in all children was done using psoriasis severity index scale also 6 minute walk test was done for all children for the assessment of the functional and endurance capacity. Results showed there is a significant improvement of psoriasis severity index while the 6 minutes' walk showed no significant differences between both groups in comparing the post treatment results except the 6 minute walk test, weight and BMI, there was significant difference in favor of the study group which suggest that both diet and exercise had proven their effect on psoriasis.

### Key words
1. Diet
2. Exercise psoriasis.
3. Plaque psoriatic child
4. Child with plaque psoriatic

### Classification number
000.000.

### Pagination
81 p.
**Background:** Patient registry is an organized documented system to collect uniformed data for cerebral palsy population. Aim: this study was conducted to establish data base for cerebral palsy (CP) in ElMahalla city and its surrounding cities Samanoud, Qotor, Zyfa, El-Gharbia governorate. Subjects and Methods: children with cerebral palsy who are receiving physical therapy services of both genders, ranged in age from 3 months to 18 years in Ministry of Health, Insurance hospitals, units of family medicine in villages and cities and all private centers of physical therapy in El-Mahalla city and its surrounding cities at EL-Gharbia governorate were involved in this study there number were 965 case. The outcome measures were Gross Motor Measurement Scale, Gross Motor Function Classification System from 3month to 18 years, Manual Ability Classification System and Viking Speech Scale. Results: Within the study participants, 72.5% are spastic type, 16% are dyskinetic, 7% are ataxic and 4.5% are hypotonic. Percentage of CP based on GMFCS were; 9.5% for level I, 25% for level II, 31.5% for level III, 18.5% for level IV, and 15.5% for level V. (GMMS) was used to determine score performance for each participant. According to MACS and Viking speech scale high incidences of children with CP were classified at level III. Conclusion: The current study revealed that CP children who are receiving physical therapy; incidence of spastic type is the major while hypotonic is the least prevalence. High incidences of children with CP were classified level III in GMFCS, MACS and Viking speech scale. The results revealed that more than 2/3 of children with CP are actively ambulant, functional and able to communicate.

**Key words**

1. Physical therapy registry.
2. Cerebral palsy in children.
3. Registry of cerebral palsy.
5. Children with cerebral palsy.

**Classification number**: 000.000.

**Pagination**: 99 p.

**Arabic Title Page**: إنشاء إنموزج قاعدة بيانات العلاج الطبيعي لأطفال الشلل المخى بمحافظة الغربية.

**Library register number**: 5493-5494.