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

Doctoral Degree 2011

Author	:	**Alaa Ramzy Morgan.**
Title	:	**Role of low level laser in modulation of knee hemoarthrosis .**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Amira Mohamed El- Tohamy.**
	:	**Sonia Adolf Habib**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

The purpose of this study was to investigate the effect of low level laser in modulation of knee hemoarthrosis in hemophilic children. Forty hemophilic children their age ranging from seven to fourteen years, divided randomly into two groups (control and study groups). The control group received selected physical therapy program only (therapeutic ultrasound, stretching and strengthening exercises), while the study group received low level laser therapy in addition to the same program given to the control group. The following parameters including swelling and peak torque (Biodex isokinetic dynamometer) were measured before and after three successive months of treatment. The results of the study revealed significant improvement in most of the measured variables of the two groups, but in group two the improvement was significantly increased more than group one. We may conclude that low level laser therapy is an effective additional tool to physical therapy program in treating knee hemoarthrosis of hemophilic children as it plays an important role in decreasing swelling.

Key words	:	**Low level laser.**
	:	**Hemophilia.**
	:	**Knee hemoarthrosis.**
	:	**lasers.**
Arabic Title Page	:	**دور الليزر منخفض الشدة في التأثير على نزيف الدم داخل الركبة.**
Library register number	:	**2475-2476.**

Author	:	**Asmaa Abd El-Star Abo Nour.**
Title	:	**Balance assessment in hemophilic children with knee and ankle hemarthrosis.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Elham Elsayed Salem.**
	:	**Naglaa Mohmed Shahein.**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

Background: Musculoskeletal disorders in hemophilics represent the highest percentage of lesions, which predominantly affect lower limbs, that influencing balance control, standing and walking. The purpose: this study was conducted to investigate the effect of knee and/ or ankle hemarthrosis in hemophilic children on balance control compared to normal children. Subjects: twenty normal children and eighty children with knee and/or ankle hemarthrosis (thirty with mild & fifty with moderate degree), of the same age group from 8 to 12 years old, from the eighty children there were forty-four children with knee hemarthrosis. All children were tested using Pediatric Balance Scale and Biodex Balance System; two balance tests were selected (dynamic balance test& dynamic limits of stability. This study was conducted in the laboratory of balance of Faculty of Physical Therapy, Cairo University. Results: There was a significant difference among the study groups compared to normal group in the Pediatric Balance Scale score, while the results of balance tests on Biodex Stability System indicated non significant difference in the normal group in relation to mild hemophilic children and a significant difference in the normal group in relation to children with moderate and knee hemarthrosis in most of the variables of both tests while P value < 0.05. Conclusion: The results of this study showed that hemophilic children have balance problems suggesting that both balance testing should be added to physical therapy evaluation for those children.

Key words	:	**Hemophilia.**
	:	**assessment in hemophilic children**
	:	**Hemarthrosis.**
	:	**Balance control.**
	:	**postural control.**
Arabic Title Page	:	**تقييم الاتزان لأطفال سيولة الدم المصابين بتجمع دموي في تجويف مفصلي الركبة و الكاحل.**
Library register number	:	**2449-2450.**

Author	**:**	**Asmaa Osama Sayed Abdel-Khalek.**
Title	**:**	**Proprioceptive training in hemophilic children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Elham Elsayed Salem**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

Efficient movement function and the maintenance of balance during dynamic tasks are more complex than only force production it requires a primary sensory mechanism for motor control which is propioception. The objective of this work is to study alterations in proprioceptive performance to subsequently evaluate the appropriate therapeutics. The purpose of the study to determine whether an exercise intervention improves balance in children with hemophilia following the participation in a balance and proprioceptive training program on Biodex stability system. Thirty hemophilic boys aged between 7 and 14years with hemophilia (type A&B) participated in this study. They were classified randomly into two groups of equal number, (control and study). The control group received Factor replacement as prophylactic medical management. The study group received propiceptive training program and Factor replacement. propioception parameters were assessed using Biodex stability system in both groups with eye opened and with eye closed, before and after three months of the application of the treatment program. The results of this study revealed statistically highly significant improvement in nearly all of the measuring variables of the study group (P<0.01) when comparing its pre and post treatment results, and when comparing the post treatment results of the control group. From the obtained results of this study, it can be concluded that, proprioceptive training is a beneficial modalities that may be used to improve standing postural control with minimal stress to the joint in hemophilic children.

Key words	**:**	**Hemophilia.**
	:	**Haemarthrosis.**
	:	**Proprioceptive training.**
Arabic Title Page	**:**	**تدريبات المستقبلات الحسية الداخلية لحالات السيولة عند الأطفال.**
Library register number	**:**	**2465-2466.**

Author	**:**	**Hatem Abd El-Mohssen Emara.**
Title	**:**	**Postural control and back geometry for spastic diplegic children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Elham Elsayed Salem.**
	:	**Fatma Mustafa.**
	:	**Mustafa Hassan.**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

The purpose of this study was to evaluate the effect of postural control training using Biodex balance system on back geometry in spastic diplegic children.Forty children from both sexes (ranged in age from 5 to 7 years old) participated in this study. They were classified into two groups of equal number (control and study). Each group composed of 20 children..All patients were assessed before and after the treatment program by the formetric system .The control group received the selected therapeutic exercise program. The study group received in addition to the same therapeutic exercises program postural control training using Biodex balance system. The treatment program was conducted for both groups once daily, three days per week, over a period of three successive months.The results revealed significant improvement in the measured variables of both the control and study groups when comparing their pre and post treatment mean values. However, more significant improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group.

Key words	**:**	**diplegic children.**
	:	**Postural Control.**
	:	**Back geometry.**
	:	**Cerebral Palsy.**
	:	**Diplegia.**
Arabic Title Page	**:**	**التحكم فى القوام وجيومترية الظهر للأطفال المصابين بالشلل التقلصى المزدوج.**
Library register number	**:**	**2463-2464.**

Author	:	**Hatem Hassan Allam.**
Title	:	**Effect of selected therapeutic exercises on bone mineral density and quality of life in hemophilic children.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Amira Mohamed El-Tohamy.**
	:	**Hatem Abd El-Rahman**
	:	
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

The purpose of the study was to assess the bone mineral density and quality of life in children with hemophilia and, determine the effect of the selected therapeutic exercises in improving both. Forty male children with hemophilia participated in this study. They were assigned randomly into two equal groups: study& control groups. Their age ranged from 8 to12 years with a mean age was 10.37(±1.48) years. They were suffered from mild hemophilia type A. Children in the control group received conventional physical therapy program which include rest, ice, compression and elevation and other physical therapy modalities for each joint or muscle were affected by any bleeding occurred at any time during the study period. Children in the study group received conventional physical therapy program in addition to that; they received the selected weight bearing exercises, strengthening and proprioceptive training exercises, three times weekly for about six months. The total bone mineral density was evaluated at start and at the end of the study period. The results of the study revealed that there was no significant difference in The total bone mineral density and quality of life in the control group between the first and second evaluation at a level of significance (P >0.05). However there was a significant improvement in the total bone mineral density z-score in the study group after application of the selected therapeutic exercises at a level of significance (P <0.05). There was a significant difference between the control and study groups as regard the total bone mineral density z-score and quality of life in favor of the study group at the end of the treatment period. Also there was a significant inverse correlation between the total bone mineral density z-score and total hemophilia joint health score. Conclusion and recommendations: Early detection of osteopenic hemophilic children using densitometry scanning, appropriate preventive measures for diminished bone mineral density and Assessment and training of fitness and physical conditioning must be done. So, it can be concluded that, the selected therapeutic exercises are highly recommended to be used in conjunction with conventional physical therapy program in rehabilitation of the children with hemophilia.

Key words	:	**bone mineral density,**
	:	**Hemophilia.**
	:	**therapeutic exercises.**
	:	**quality of life.**
Arabic Title Page	:	**تأثير التمرينات العلاجية المختارة على كثافة العظام و نوعية الحياة عند الأطفال مرضى الهيموفيليا.**
Library register number	:	**2441-2442.**

Author	**:**	**Mamdouh Gabr Haggag.**
Title	**:**	**Effect of Obesity on Plantar Pressure And Gait Pattern in Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Emam Hassan El-Negmy.**
	:	**Eman El-Hadidy.**
	:	**Ibrahim Shokry.**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

The purpose of this study was to determine the effect of obesity on plantar pressure and gait pattern in children. Forty five children ranged in age from six to twelve years participated in this study. They were classified according to body mass index into three groups of equal numbers (normal- overweight- obese). Evaluation was done using the foot scans system and motion analysis system in all groups. The foot scans system was used to measure the peak force and pressure under the three areas of foot (fore foot, mid foot, and rear foot). The motion analysis system was used to measure the hip joint mechanical power (energy generation by hip extensors, energy absorption by hip flexors, and energy generation by hip flexors). The results of the study showed that the overweight and obese children have significantly higher peak force (over forefoot, rear foot, and mid foot areas) and higher peak pressure (over forefoot and rear foot area) than those showed in normal children. But there was no significant differences in the peak pressure over mid foot among the three groups.

Also, the overweight and obese children modified their hip movement pattern by shifting from extensor to flexor moment earlier in their gait cycle. This led overweight and obese children to significantly decrease the energy generated by the

hip extensors during weight acceptance and significantly increase the energy absorption by the hip flexors with no significant difference in the energy generated by hip flexors compared with normal children. It was concluded that there was significant effect of obesity on changing the plantar pressure pattern in the children as it increased the pressure under fore foot and rear foot areas and also, flattened the medial longitudinal arch under the mid foot area. Also, there was significant effect of obesity on gait pattern in children as it changed the hip movement pattern by shifting from extensor to flexor moment earlier in the gait cycle.

Key words	**:**	**Obesity in children**
	:	**Plantar Pressure Pattern.**
	:	**Gait.**
Arabic Title Page	**:**	**تأثير السمنة على توزيع الضغط أسفل القدم وأنموذج المشى عند الاطفال.**
Library register number	**:**	**2479-2480.**

Author	:	**Marwa Mamdouh Ali Mohamed.**
Title	:	**Normative Data of Balance in Healthy Egyptian Children.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Hoda Abd-alazem El-talawy.**
	:	**Khaled Ahmed Olama.**
	:	**Amany mousa.**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

The purpose of this study was to establish normative data of balance in healthy Egyptian children. Two hundred normal healthy children (age from six to ten years) participated in this study. Dynamic postural stability using the Biodex Balance System were measured to all children on levels 8 (most stable) and 2, (least stable) 2 times for each levels for 20 seconds, dynamic limits of stability test were measured to all children on levels 8 (most stable) and 2 (least stable) 2times. Collected data (APSI, MLSI, OSI, overall direction control, time) were computerized to the computer, manipulated and analyzed using SPSS version 17. Results showed that age groups 8-10 years old have a significance better balance compared to age groups 6-8 years old and girls have better stability than boys.

Key words	:	**Balance.**
	:	**Children.**
	:	**Normative Data.**
	:	**Biodex Balance System.**
Arabic Title Page	:	**المعايير البيانية للاتزان عند الأطفال المصريين الأصحاء.**
Library register number	:	**2589-2590.**

Author	:	**Mohamed Ali Ebrahim Eldosoky.**
Title	:	**Multi sensory stimulation approach and gross motor development in diplegic children.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Faten Hassan Abd El-Aziem.**
	:	**Ali Mostafaa Ali**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

The purpose of this study was to evaluate the effect of multi sensory stimulation approach on gross motor development in diplegic children. Forty spastic diplegic children, ranged in age from 2 to 4 years participated in this study. They were classified into two groups equal in numbers (control and study). The control group received a selected physical therapy program, while the study group received the same selected physical therapy program in addition to the multi sensory stimulation approach. Gross motor development were assessed before and after three months of application of the treatment program using gross motor function measures and Peabody Developmental Motor Scale for both groups. The results of the study revealed significant improvement in all measured variables (reflexes, stationary and locomotion develop by PDMS and crawling, kneeling and standing improvement % by GMFM) for both groups with significance improvement in the study group.

Key words	:	**Cerebral Palsy.**
	:	**Hippotherapy.**
	:	**Sensory Motor Integration.**
	:	**Spastic Diplegia.**
	:	**gross motor development.**
	:	**diplegic children**
Arabic Title Page	:	**منهاج التنبيه الحسى المتعدد والتطور الحركى لدى الأطفال المصابين بالشلل المزدوج.**
Library register number	:	**2437-2438.**

Author	:	**Nanees Essam Mohamed Salem.**
Title	:	**Influence of Foot Progression Angle on Foot Pressure Distribution in Normally Developed Children.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Amira Mohamed El Tohamy.**
	:	
	:	
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

In order to establish the clinical utility of foot progression angle and foot pressure distribution in the assessment and treatment of childhood foot pathology, a reliable set of normal data describing non-pathologic feet is required. The purpose of this study was to describe and compare the normal changes in foot progression angle and foot pressure measurement values with developing age in normal children and also, to determine the side differences. Additionally, the relationship between the foot progression angle and percentage of medial integral were investigated. This study was conducted on 150 normal children from both sexes ranging in age from five to eight years. They were classified into three age groups of equal numbers, group (A) from five to six, group (B) from six to seven and group (C) from seven to eight years. Foot progression angle by dynamic footprint and percentage of medial integral and percentage of heel integral across five foot segments (heel, lateral mid-foot, medial mid-foot, lateral forefoot and medial forefoot) by Tekscan's Matscan pressure assessment system were obtained during barefoot walking at free walking speed. The dependent variables were compared among the three age groups using MANOVA and to magnify the side differences, three repeated measures were used. Additionally, correlations were conducted to study the relationships between foot progression angle and percentage of medial integral. Findings revealed a statistically significant difference ($p<0.0125$) in the foot progression angle and percentage of medial integral, while percentage of heel integral showed no significant difference ($p>0.0125$). However, considering the side differences (right and left), there were non-significant differences ($p>0.0125$). Finally, there was non-significant weak negative correlation between the foot progression angle and percentage of medial integral in group (A and B), unlike, group (C) there was non-significant weak positive correlation. Based on the previous findings, it may be concluded that foot progression angle analysis and foot pressure distribution particular percentage of both medial and heel integrals, can provide quantitative and objective information that can be used in the clinical assessment of rehabilitation strategies to detect functional abnormalities and to determine the appropriate treatment.

Key words	:	**Foot progression angle.**
	:	**foot pressure distribution.**
	:	**Footprint.**
	:	**Tekscan's Matscan pressure assessment system.**
Arabic Title Page	:	**تأثير زاوية القدم على توزيع ضغط القدم للأطفال المتطورين طبيعيا.**
Library register number	:	**2631-2632.**

Author	**:**	**Radwa Saeed Abdulrahman**
Title	**:**	**Effect of Magnetic Therapy versus Faradic Stimulation on Modulation of Nerve Conduction Velocity in Erb's Palsy.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Emam Hassan El-Negamy.**
	:	**Mohamed Tawfek.**
	:	**Shadia Abdul Aziz**
	:	**Amina Hendawi**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

The purpose of this study was to establish the effect of pulsed electro magnetic field (PEMF) versus faradic stimulation (FS) in modulating nerve conduction velocity (NCV) of the affected arm in brachial plexus palsied children, fourty five brachial palsied children ranged in age between 7 days and 6 months participated in this study. They were classified randomly into 3 groups of equal numbers, control and study groups (1 and 2); they were evaluated using electromyography (EMG) and Peabody developmental motor scale (PDMS). The control group received a traditional exercise therapy program only. While the study group (1), received (FS) applied to the Erb's point, in addition to the traditional exercise therapy program given to the control group. Study group (2) received the (PEMF) plus the given traditional exercise therapy program. There was no statistical significant difference in NCV recorded between the three groups before treatment. There was statistically significant difference when comparing the results after treatment between the three groups, showing clinical neurophysiological improvement in the form of increasing NCV of the nerves on the affected side in both study groups, showing improvement in study group 2 more than group 1. Also when comparing control group with study 1 and 2 the improvement was in favor of study 2.

Key words	**:**	**Brachial palsy.**
	:	**Faradic stimulation.**
	:	**nerve conduction velocity.**
	:	**pulsed electro magnetic field.**
Arabic Title Page	**:**	**تأثير العلاج المغناطيسي مقابل التنبيه الفارادي في تعديل سرعة توصيل الأعصاب الطرفية في الشلل الإربـي.**
Library register number	**:**	**2539-2540.**

Author	**:**	**Ragab Kamal Abd Elmohsen Elnaggar**
Title	**:**	**Effect of Suit Therapy on Balance in Spastic Cerebral Palsied Children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Emam Hassan Elnegmy.**
	:	**Gehan Hassan Elmeniawy.**
	:	**Rokaya Abd Elshafy Soliman.**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	
The purpose of this study was to evaluate the effect of wearing the TheraSuit during the application of a selected physical therapy program on balance in spastic diplegic cerebral palsied children. Thirty spastic diplegic children with twelve months of age according to Denver developmental screening test participated in this study. They were classified randomly into two groups of equal numbers, control and study groups. The Biodex balance system was used to evaluate the balance in the form Antro-posterior stability index, Medio-lateral stability index and Overall stability index for the two groups before and after four successive weeks of application of the treatment programs. The control group received the selected physical therapy program. The study group received the same selected physical therapy program given to the control group while wearing the TheraSuit. The pre-treatment results revealed non significant difference in all measuring variables between the two groups. In comparing the pre and post-treatment results for the control and study groups revealed significant improvement in all measuring variables of the two groups. Post treatment significant difference was recorded in all measuring variables between the two groups in favor of the study group.		
Key words	**:**	**Cerebral palsy.**
	:	**Diplegia.**
	:	**Balance.**
	:	**suit therapy.**
Arabic Title Page	**:**	**تدريبات الاتزان بالاستخدام المكثف للبدلة العلاجية لدى الاطفال المصابين بالشلل التصلبي المزدوج.**
Library register number	**:**	**2513-2514.**

Author	:	**Safy Eldin Mahmoud Abo-Ali.**
Title	:	**Soft Tissue Tightness Control: A Combined Physical Therapy Technique.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Emam H. El Negmy.**
	:	**Faten Hassan Abd-El Azeim.**
	:	**Amina Salem Hendawy.**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

Contractures and soft tissues tightness in hemiplegic cerebral palsy children are common complications of neurological and musculoskeletal origins. Stretch is widely used for prevention and management of contractures. The purpose of this study was to introduce a combined stretch program and determine whether it is more effective than traditional physical therapy program alone on soft tissues tightness control of hamstrings muscles of the affected side in hemiparetic children.

The study was conducted on sixty children suffering from hemiparetic cerebral palsy. Their ages ranged from 6 to 10 years. They were divided into two groups of equal numbers control group and study group. The evaluation procedure included muscle assessment by using BIODEX SYSTEM 3 (ISOKINETIC) measurements, Goniometer, and Tap measurements before and after for 4 weeks of treatment for both groups. Control group received physical therapy program in the form of Neuro-developmental treatment approach. Study group, received the same physical therapy program used for the control group in addition to new designed combined stretch program on the affected side consisted of hot application to the hamstring muscles followed by massage, pulsed ultrasonic therapy, faradic stimulation to the quadriceps muscles and stretching of the hamstring muscles. No significant difference was recorded between groups before treatment while significant difference was recorded after treatment in favor of the study group, which strongly supports adding the combined stretch program in treatment of hemiparetic children with hamstring tightness.

Key words	:	**Cerebral palsy.**
	:	**Hemiplegia.**
	:	**Stretching.**
	:	**Soft tissue tightness.**
	:	**combined physical therapy techniques.**
Arabic Title Page	:	**التحكم في الأنسجة الرخوة المشدودة: برنامج علاج طبيعي مدموج.**
Library register number	:	**2433-2434.**

Author	**:**	**Tamer Emam Hassan El-negmy.**
Title	**:**	**Impact of the suit therapy on gait pattern for spastic diplegic cerebral palsied children.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Elham Elsayed Salem.**
	:	**Amina Salem Hendawy.**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

The main goal of this study was to evaluate the effect of wearing ThearSuit during application of traditional physical therapy program on different parameters of gait pattern in patients with diplegic cerebral palsy. Thirty mild spastic diplegic cerebral palsy patients according to modified Ashworth's scale with chronological age ranging from four to seven years were recruited from the outpatient clinic Faculty of Physical Therapy Cairo University to participate in this study. They were classified randomly into two groups of equal number (fifteen patients each), control (A) and study (B). Clinical foot print and two digital cameras system with AutoCAD motion program were used for evaluation of gait pattern before and after three successive months of treatment. Group (A) received a selected therapeutic program and group (B) received the same therapeutic program given to group (A) while wearing TheraSuit. The pre treatment results reveled non significant difference in all measured variables between the two groups. In comparing the pre and post treatment results of group (A) reveled significant improvement in all tested variables. Also in comparing the pre and post treatment results of group (B) reveled significant improvement in all measured variables. Comparing the mean results of all measured variables of the two patient's groups after termination of the treatment program showed significant difference in favor of group (B) the study group.

Key words	**:**	**Cerebral palsy.**
	:	**Gait pattern.**
	:	**Suit Therapy.**
	:	**Diplegia.**
	:	**spastic diplegic children.**
Arabic Title Page	**:**	**" أثر البدلة العلاجية على أنموذج المشى فى الأطفال المصابين بالشلل التقلصى المزدوج.**
Library register number	**:**	**2677-2678.**

Author	**:**	**Tamer Ibrahim Abo Elyazed.**
Title	**:**	**Effect of aerobic exercise on glycemic level in children with type 1 diabetes mellitus.**
Dept.	**:**	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	**:**	**Azza Fikry Ismail.**
	:	**Faten Hassan Abd El Azeim.**
	:	**Mona Atia Hana.**
Degree	**:**	**Doctoral.**
Year	**:**	**2011.**
Abstract	**:**	

The aim of this study was to determine effect of aerobic exercise on glycemic level in children with type 1 diabetes mellitus.The study was conducted in Abo-Elrish peadiatric hospital and included 30 patients (13 females, 17 males). Their age ranged from 11 up to 15 years old. , they were received aerobic exercise program, three sessions per week for successive three months. The session lasted for thirty minutes. Measurements were taken before and after treatment course, blood glucose level also was taken 3 months later to treatment course. The data obtained in this study indicated that, there was significant improvement following application of aerobic exercise for three months in blood glucose level, glycosylated hemoglobin and lipid profile. Only insulin intake showed no significant reduction. So aerobic exercise may be introduced as a method with medical treatment as a combined treatment for children with T1DM.

Key words	**:**	**aerobic exercise.**
	:	**glycemic level.**
	:	**type 1 diabetes mellitus.**
Arabic Title Page	**:**	**تأثيرالتمرينات الهوائيه على مستوى السكر فى الدم لدى الاطفال مرضى النوع الاول من البوال السكرى.**
Library register number	**:**	**2603-2604.**

Author	:	**Wagdy William Amin.**
Title	:	**Pulsed electromagnetic field and treatment of chronic synovitis in hemophilic children.**
Dept.	:	**Physical Therapy Department for Growth and Developmental Disorder in Children and its Surgery.**
Supervisors	:	**Emam Hassan El Negmy.**
	:	**Hala Ibrahim Kassem.**
	:	**Maryan Yossery Fahmy Gerguss.**
Degree	:	**Doctoral.**
Year	:	**2011.**
Abstract	:	

Back ground: The purpose of study was to investigate the effect of low frequency, low intensity pulsed electromagnetic field in treating chronic synovitis in hemophilic children. Subjects: Forty hemophilic children were assigned randomly into two groups of equal number, control and study groups, each contained 20 Patients. The control group received traditional treatment program (therapeutic ultrasound, stretching exercises and strengthening exercises) for one hour, while the study group received low frequency, low intensity pulsed magnetic field in addition to the same program given to the control group. The following parameters including swelling, range of motion and laboratory examination (Biodex isokinetic dynamometer) were measured before and after three successive months of treatment. Results: The results of study revealed significant improvement in the two groups when comparing their pre and post treatment results. Significant improvement was observed in favor of the study group when comparing the post treatment results of the two groups. Conclusion: On basis of the present data, it is possible to conclude that low frequency, low intensity pulsed electromagnetic field is an effective additional tool to physical therapy program in treating chronic synovitis of hemophilic children as it plays an important role in decreasing swelling and improving muscle power and range of motion of the knee joint.

Key words	:	**Pulsed electromagnetic field.**
	:	**hemophilic children.**
	:	**Electromagnetic field.**
	:	**Hemophilia.**
	:	**chronic synovitis.**
Arabic Title Page	:	**المجال الكهرومغناطيسي المتقطع وعلاج التهاب الغشاء المصلي المزمن عند الأطفال المصابين بسيولة الدم.**
Library register number	:	**2439-2440.**