

Physical Therapy Department of Surgery

Master Degree
2008

Author	:	Ahmed Mamdoh Mohamed Abdel Kader.
Title	:	Efficacy of laser versus ozone therapy on chronic ulcerations of lower limb.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Mohamed Nabil Mawsouf.
	3.	Mohamed Taher Ahmed.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of laser versus ozone therapy on chronic ulcerations of lower limb. Methods of evaluation (wound surface area, wound volume measurement, ulcer perimeter healing improvement% and ulcer volume healing improvement%). Methods:- Forty-five (27 males and 18 females) patients with ischaemic chronic ulcerations and limited or incipient skin necrosis due to obliterative atherosclerosis affecting the lower limbs were randomly divided into three group. Group (A) received the laser .Group (B) received ozone therapy , duration of treatment was 15 minutes, two months. Both groups received also the traditional treatment. Group (C) (Control group) received only the traditional treatment. Results:- The result showed that ozone is more beneficial in decreasing ulcer surface area and volume as well as increasing ulcer perimeter and volume healing improvement % than the laser. Conclusion: - both ozone (to greater extent) and laser (to lesser extent) were effective in accelerating healing of the lower limb chronic ulcerations.</p>		
Key words	1.	Lasers.
	2.	Ozone.
	3.	lower limb.
	4.	chronic ulcerations.
Arabic Title Page	:	فعالية الليزر مقابل العلاج بالاوزون على التقرحات المزمنة بالطرف السفلى.
Library register number	:	1863-1864.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT OF SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Amr Bayoumi Salama.
Title	:	The Effect of Exercise Program Intervention for Children with Acute Lymphoblastic Leukemia.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Adel Abd El-Hamid Nossier.
	2.	Iman Ali Attia.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: The purpose was to investigate the effect of a 12 weeks supervised conditioning program including both resistance and aerobic training on measures of aerobic fitness, muscular strength, and cancer related fatigue in children receiving treatment for acute lymphoblastic leukemia (ALL). Subject: Forty children in the maintenance phase of treatment against ALL selected from National Cancer Institute aged 6:12 years were randomly assigned to exercise and control group. Procedures: The children of exercise group performed three sessions per week for 12 weeks of resistance and aerobic training while control had no any exercise intervention. Before and after training a treadmill test determining VO₂peak, muscle strength of upper and lower limb by hand held dynamometry, and level of fatigue by Iowa fatigue scale were assessed. Results: After training significant increases in VO₂peak, upper-and lower muscle strength with significant decrease in fatigue level were shown in the exercise group but no significant change in control group. Conclusion: young children in the maintenance phase of treatment against ALL can safely perform both aerobic and resistance training. Training results in significant increase in measures of aerobic fitness and strength with decrease in fatigue.</p>		
Key words	1.	ALL.
	2.	Aerobic training.
	3.	Resistance exercise.
	4.	Physical fitness.
	5.	Muscle strength.
		Fatigue.
Arabic Title Page	:	تأثير التدخل ببرنامج تمرينات على الأطفال المصابة بسرطان الدم الليمفاوي الحاد.
Library register number	:	1769-1770.

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

Author	:	Asmaa Fawzi El Sayed.
Title	:	Efficacy of two different pulsed electromagnetic field therapy programmes on diabetic foot ulcers.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam.
	2.	Ahmed Sherief Gamal.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of the pulsed electromagnetic field therapy on acceleration of diabetic foot ulcers . Methods of evaluation (wound surface area and ulcer volume). Methods:- Forty-five male patients with type II diabetes mellitus and all suffering from unilateral grade II(Full thickness) diabetic foot ulcer were randomly divided into three group. Group A the first programme of the pulsed electromagnetic field therapy .Group B the second programme of the pulsed electromagnetic field therapy , duration of treatment of 20 minutes, three months. Both group recived medical care and traditional physical therapy .Group C (Control group) they received only medical care and traditional physical therapy. Results:- The result showed the second program of PEMFT in more beneficial in decreasing ulcer surface area and ulcer volume measurement and improving healing of the diabetic foot ulcers than the first program of PEMFT. Conclusion:- both the first programme and the second programme of pulsed electromagnetic field therapy were effective in accelerating ulcer healing in diabetic foot ulcers.</p>		
Key words	1.	Diabetes Pulsed Electromagnetic Field Therapy.
	2.	Wound Surface Area.
	3.	Ulcer Volume.
	4.	pulsed electromagnetic field therapy.
	5.	diabetic foot ulcers.
Arabic Title Page	:	تأثير برنامجين مختلفين للعلاج بالمجال الكهرومغناطيسي المتقطع على قرح القدم السكرية.
Library register number	:	1758-1759.

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

Author	:	Ayman Mohamed El Metwaly.
Title	:	The effect of pulsed electromagnetic field on motor conduction velocity in peripheral burn neuropathy.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Ann Abd El Kader.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to determine the effect of pulsed electromagnetic field on motor conduction velocity in peripheral burn neuropathy. Methods of evaluation: (Measurement of the common peroneal nerve motor conduction velocity). Methods: 30 male and female patients with peripheral burn neuropathy of the common peroneal nerve were divided into two groups. Group (A) received the true pulsed electromagnetic field therapy and routine physical therapy .Group (B) received the false pulsed electromagnetic field therapy and the same routine physical therapy, duration of treatment was 20 minutes daily for 3 weeks as a total period of treatment. Results: Result showed that the pulsed electromagnetic field therapy was effective and beneficial in increasing the motor conduction velocity of the neuropathic common peroneal nerve. Conclusion: pulsed electromagnetic field therapy is advantageous and fruitful in peripheral burn neuropathy via its depressor effects in decreasing the dominant sympathetic tone in burned patients, decreasing the reflex muscle spasm, increasing the peripheral circulation, decreasing oedema and inflammation, relieving the compressive ischaemic pain and improving the nerve functions.</p>		
Key words	1.	Pulse electromagnetic field therapy
	2.	peripheral neuropathy.
	3.	Burn.
	4.	electrodiagnosis.
	5.	motor conduction velocity.
Arabic Title Page	:	علاقة العلاج بالمجال الكهرومغناطيسي النباض بسرعة توصيل الأعصاب الطرفية المُعْتَلَة لمرضى الحروق.
Library register number	:	1829-1830.

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

Author	:	Emad Makram Ghattas.
Title	:	Comparative study between mesotherapy and aerobic exercises in treatment of outer female thigh adiposity.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Wafaa Hessien Borhan.
	2.	Ashraf El-Sebaie Mohammed.
	3.	Emad Makram Ghattas.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of the aerobic exercises and mesotherapy on the localized adipose tissue in the female's outer area of thigh. Methods of evaluation (Measurement of the thigh circumference, thigh skin fold, ultrasonographic depth of the fatty pad, photographic analysis of the fatty pad size, and the plasma catecholamines level). Methods:- 40 female patients with localized adipose tissue in the outer area of their thighs, were divided into two groups. Group (A) received aerobic exercises training. Group (B) received mesotherapy application, duration of treatment was 45 minutes, every other day for the aerobic training, while mesotherapy was repeated every two weeks for 2 months as a total period of treatment. Results:- Result showed that both aerobic exercises training and mesotherapy were effective, but aerobic exercises training was more fruitful and beneficial in decreasing the localized adiposity. Conclusion: - both were effective in decreasing the localized adiposity, but aerobic exercises are more advantageous.</p>		
Key words	1.	Aerobic exercises.
	2.	Mesotherapy.
	3.	Catecholamines.
	4.	Photographic analysis.
	5.	Ultrasonography.
Arabic Title Page	:	دراسة مقارنة بين الميزوثيرابي والتمارين الهوائية في علاج السمنة الموضعية في منطقة الفخذ الخارجية للسيدات.
Library register number	:	1799-1800.

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

Author	:	Khadra Mohamed Ali.
Title	:	Effects of microcurrent stimulation versus pulsed electromagnetic field on wound healing in burned patients.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Wafaa Hussin Borhan.
	2.	Salah El Din Abd AlGhany.
	3.	Amal Mohamed Abd Elbaky.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: the purpose of current study was evaluated the efficacy of the pulsed electromagnetic field therapy versus microcurrent electrical stimulation on burned wounds healing by using wound surface area(WSA) ,maximum wound length (MWL) and duration of healing. Methods: Forty-five patients with dermal burn injuries on the forearm were arranged in the present study randomly divided into three equal group's, The first group received pulsed electrical magnetic field, The second group was treated with microcurrent electrical stimulation and the third group (control) received only traditional physical therapy program. Assessment: The WSA and MWL had been measured 48 hours after burn injury (Pre), after 14 days Post (1), and after one month Post (2) from the beginning of treatment for all groups. For Group A (Pulsed electromagnetic field Group), the PEMF was set for the treatment with power supply: 230v/50 Hz, with total duration of treatment of 20 minutes, per day for four weeks. For group B (Micro amperage Group); the treatment was set at, constant current of 50% of duty cycle, at 0.3Hz with modified square biphasic pulsed waveform and intensity of 600 microamperes with duration 45min. Results: The results showed that there was highly significant decrease in WSA, maximum length and duration of healing in MENS group and PEMF group as compared with the control group. In relation to WSA and MWL the study revealed that the results obtained in Group A were superior to that of Group B but no significant difference after 14 days, on the other hand was reported after one month group B was superior to that of group A but no significant difference. Conclusion: It was concluded that both pulsed electromagnetic field and micro amperage electrical stimulation were effective in accelerating wound healing.</p>		
Key words	1.	Burn.
	2.	Pulsed Electromagnetic.
	3.	Micro Amperage Electrical Stimulation.
	4.	Wound Healing.
Arabic Title Page	:	تسريع التئام الجروح بواسطة المجال الكهرومغناطيسي مقابل التنبيه الكهربائي الدقيق لدى مرضى الحروق.
Library register number	:	1763-1764.

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

Author	:	Mahmoud Ibrahim Naser Bolbol.
Title	:	Effects of laser puncture versus microcurrent stimulation on prostatodynia and pelvic myoneuropathy.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Ahmed Abd Alateef Moharum.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of the laser puncture and the microcurrent stimulation on prostatodynia and pelvic myoneuropathy. Methods of evaluation (Measurement of the serum cortisol level and the prostatitis symptom severity index). Methods:- 45 male patients with prostatodynia and pelvic myoneuropathy, were divided into three groups. Group (A) received the laser puncture plus the traditional physical therapy .Group (B) received the microcurrent stimulation plus the traditional physical therapy. Group (C) received the traditional physical therapy only, duration of treatment was 15 minutes, 3 times weekly for 3 months as a total period of treatment. Results:- Result showed that both the laser puncture and the microcurrent stimulation were effective, but the microcurrent application was more fruitful and beneficial in decreasing the prostatodynia and pelvic myoneuropathy. Conclusion:- both were effective in decreasing the prostatodynia and pelvic myoneuropathy, but microcurrent application is more advantageous.</p>		
Key words	1.	Microcurrent.
	2.	Prostatodynia.
	3.	pelvic myoneuropathy.
	4.	serum cortisol level.
	5.	prostatitis symptom severity index.
	6.	Lasers.
Arabic Title Page	:	تأثيرات الوخز بالليزر مقابل التنبيه الكهربائي الدقيق على آلام البروستاتا و الاعتلال العصبي العضلي للحوض.
Library register number	:	1885-1886.

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

Author	:	Marwa Hamed Abd El Aziz Emara.
Title	:	Pulsed Electromagnetic field therapy efficacy on genitofemoral and ilioinguinal postoperative neuralgia.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Ahmed Sherif Kareem.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of the thoracolumbar pulsed electromagnetic field therapy and the local inguinal pulsed electromagnetic field therapy on the genitofemoral and ilioinguinal postoperative neuralgia. Methods of evaluation (Measurement of the serum cortisol level and the etodolac intake). Methods:- 40 patients with postoperative genitofemoral and ilioinguinal neuralgia, were divided into two groups. Group (A) received the thoracolumbar pulsed electromagnetic field therapy .Group (B) received the local inguinal pulsed electromagnetic field therapy, duration of treatment was 20 minutes , every other day for the 3 months as a total period of treatment. Results:- Result showed that both the thoracolumbar and local inguinal pulsed electromagnetic field therapies were effective, but the thoracolumbar application was more fruitful and beneficial in decreasing the genitofemoral and ilioinguinal postoperative neuralgia. Conclusion: - both were effective in decreasing the postoperative genitofemoral and ilioinguinal neuralgia, but thoracolumbar application is more advantageous due to its depressor effects on the dominant sympathetic tone in such painful conditions.</p>		
Key words	1.	pulsed electromagnetic field therapy.
	2.	Genitofemoral.
	3.	ilioinguinal postoperative neuralgia.
	4.	serum cortisol level.
	5.	etodolac intake.
Arabic Title Page	:	فعالية العلاج بالمجال الكهرومغناطيسي النباض على الـام العصب الفخذي التناسلي والاربي الحرقفي بعد الجراحة.
Library register number	:	1861-1862.

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

Author	:	Mariam Fahmy Kelada.
Title	:	Selected physical therapy program versus abdominoplasty for the treatment of abdominal wall weakness and fat accumulation.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Ahmad Sherif Kareem.
	3.	Amal Mohamed Abd El Baky.
Degree	:	Master.
Year	:	2008.
Abstract	:	<p>Purposes: this study was designed to determine the efficacy of physical therapy in improving the abdominal muscles strength and reducing fat accumulation in the lax abdominal muscles and excess skin fat, as well as to tighten the abdominal wall muscles by Comparing between surgical abdominoplasty (Tummy Tuck) and non surgical (Physical therapy program). Methods: forty female patients were selected from the waiting list for abdominoplasty and diagnosed as needed surgical abdominoplasty, grouped randomly to two groups. Group A: (Non-Surgical group) composed of 20 persons who received physical therapy program (exercise and NMES) to abdominal muscles (Non-Surgical group). Group B: (Surgical group) 20 persons who undergo surgical operation (Tummy Tuck). Data regarding patient age, pre and post intervention weight, height, BMI, EMG, and abdominal circumference (umbilical and inter-tubercle levels) were calculated. Results: The results demonstrated non significant differences in age, body mass index, abdominal circumference and electromyography (EMG) before starting study. There is a great significant change in EMG in ($P<0.0001$) non-surgical group and conversely significant decrease in EMG in surgical group ($P<0.05$), and highly significant difference decrease ($P<0.0001$) in abdominal skin fold between two groups, and also Abdominal circumference at two levels (Umbilical and inter-tubercle) were statistically significant, where it was found that by comparing between two groups there is decrease at umbilical level in two groups but highly significantly in non-surgical group ($P <0.0001$), but was statistically significant change in surgical group at level of inter-tubercle($P<0.0001$). Conclusion: the findings of this study showed that physiotherapy has many benefits than surgical treatment in lax abdomen and fat accumulation because physiotherapy is more beneficial in increasing muscle power and decreasing abdominal contour as well as abdominal fat accumulation, also surgical treatment has a decrease effect in abdominal musculature, and the only benefit is the decrease in abdominal fat at level of umbilicus.</p>
Key words	1.	Abdominoplasty.
	2.	Tummy Tuck.
	3.	Exercise.
	4.	EMG.
	5.	NMES.
Arabic Title Page	:	برنامج العلاج الطبيعي المختار مقابل جراحه البطن التقويمية لإصلاح ضعف عضلات جدار البطن و تراكم الدهون.
Library register number	:	1731-1732.

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

Author	:	Rania Mostasfa Kamal.
Title	:	The efficacy of pulsed versus continuous ultrasound in acceleration of the venous ulcer healing.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Zakaria Mowafy Emam Mowafy.
	2.	Laila Ahmed Rashed.
	3.	Anwar Abd El Gaid El hai Ebeed.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>Purpose: to evaluate the efficacy of the pulsed versus continuous ultrasound in accelerating of the venous ulcers healing. Methods of evaluation (wound surface area and colony count). Methods:- Forty-five (27 males and 18 females) patients with leg venous ulcers were randomly divided into three group. Group (A) received the pulsed ultrasound .Group (B) received the continuous ultrasound , duration of treatment was 10 minutes, two months. Both groups received also the conservative ulcer care .Group (C) (Control group) received only the conservative ulcer care. Results:- The result showed that the pulsed ultrasound is more beneficial in decreasing ulcer surface area and colony count as well as improving healing of the venous ulcers than the continuous ultrasound. Conclusion: - both the pulsed (to greater extent) and the continuous ultrasound (to lesser extent) were effective in accelerating ulcer healing in venous ulcers.</p>		
Key words	1.	Ultrasound, Venous ulcerations.
	2.	wound surface area.
	3.	Colony count.
Arabic Title Page	:	فعالية الموجات فوق الصوتية النابضة مقابل المستمرة في تعجيل ألتئام القرحة الوريدية.
Library register number	:	1805-1806.

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

Author	:	Samia Ahmed Youssef.
Title	:	Flow-oriented incentive spirometer versus Volume-oriented spirometer training on pulmonary ventilation after upper abdominal surgery.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Adel Abdel Hamid Nossier.
	2.	Ashraf Mohamed Mohsen.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>This study was designed to evaluate the efficacy of two various methods in the management of upper abdominal surgery to improve respiratory capacity and to control postoperative pulmonary complications. This study was conducted on forty-five female patients who have had upper abdominal surgery in the department of general surgery in EL Mataria Teaching Hospital , their age ranged between 20 to 50 years , patients were randomly assigned into three equal groups : group A (flow-oriented incentive spirometer group) received triflo training program , group B (volume- oriented incentive spirometer group) received coach training program and group C (Traditional chest physical therapy program). Spirometry measures in form of FVC and FEV₁ were taken for all three groups preoperative , at the 1st and at the 7th day postoperatively , the results of the current study revealed a significant improvement in FVC and FEV₁ , at the 7th day postoperatively in the three groups of the study , the highest percentage of improvement in the both respiratory variables was seen in groups which received volume-oriented incentive spirometer training program.</p>		
Key words	1.	Upper Abdominal surgery.
	2.	incentive spirometer.
	3.	pulmonary responses.
Arabic Title Page	:	التدريب باستخدام المقياس الرئوي الحافز التدفقي مقابل المقياس الحجمي علي التهوية الرئوية بعد عمليات البطن العلوية.
Library register number	:	1831-1832.

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

Author	:	Walid Mohamed El-sayed Mohamed.
Title	:	Role of mechanical strengthening exercises on hand grip following dorsal skin graft.
Dept.	:	Physical Therapy Department for Surgery.
Supervisors	1.	Adel Abd El-Hamid Nossier.
	2.	Ahmed Shreif Azab Karim.
	3.	Amal Mohammed Abd El-baky.
Degree	:	Master.
Year	:	2008.
Abstract	:	
<p>The purpose of the study is to investigate the efficacy of mechanical strengthening exercises on hand grip strength following early excision and graft of dorsal hand burn. <u>Subjects:</u> forty male patients with age 20-40 had early excision and graft of dorsal hand burn due to thermal agent was included in the current study. They were recruited from burn unit of El-kasr El-Aini Hospital, Cairo, Egypt. They were randomly divided into two equal groups: Group (A); who consisted of 20 patients received traditional physical therapy program (positioning, splinting, ultrasonic waves, passive, active assisted, active range of motion exercises and moderately resisted exercises) and Group (B); who consisted of 20 patients received mechanical strengthening exercises in addition to the same traditional physical therapy program. All patients were underwent same medical, nursing and wound care management. dynamometer was used to measure hand grip strength. Measurements were made after three weeks of skin graft operation and after seven weeks of skin graft operation. <u>Results:</u> There were statistical significant difference in both groups but it was observed that all results concerning grip strength in the experimental group (group B) had greater statistical significance improvement than the results concerning the same results of control group (group A). It was concluded that mechanical strengthening exercises might be considered as a useful therapeutic tool in the management of post operative reconstruction of hand burn (skin graft) with the traditional physical therapy program than traditional physical therapy alone.</p>		
Key words	1.	Hand held dynamometer.
	2.	Thermal burn.
	3.	Skin graft.
	4.	Grip strength.
	5.	Mechanical strengthening exercises.
	6.	Physical therapy.
Arabic Title Page	:	دور تمارينات التقوية الميكانيكية علي قبضة اليد تبعا لترقيع جلد ظاهر اليد.
Library register number	:	1853-1854.