

Basic Science Department

Master Degree 2011

Author	:	Ahmed Hussien Mohammed Abo Bakr.
Title	:	Efficacy of polarity reversal of micro current electrical stimulation on morphological changes after tendon suture.
Dept.	:	Department of Basic Science.
Supervisors	:	Amal Fawzy Ahmed.
	:	Dalia Fathy Abd-Elmasoud.
	:	Amira Hussin Draz
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Tendon injury has poor healing process. Microcurrent therapy has been used to increase the rate of healing. Purpose: So, the purpose of this study was to investigate the efficacy of reversal of polarity of Microcurrent electrical stimulation (MES) on healing rate and morphological changes after tendon suture. Methods: 37 healthy females albino rats, 3-5 months of age and weighting 200-400 gm with mean weight 300 gm , were assigned randomly to four groups, G1:contains 5 rats which were not subjected to any surgical procedures. G2: (control group) contains 8 rats received tenotomy of right Achillis tendon. G3: contains 12 rats received tenotomy of Achillis tendon and treatment started with negative electrode for first week 3 sessions/week and continued with positive electrode. G4: contains 12 rats received tenotomy of Achillis tendon and treatment started with positive electrode for first week 3 sessions/week and continued with negative electrode. MES was applied for 30 min 3\week for 4 weeks. Results: Cathodal stimulation has shown a significant increase of healing rate as well as morphological changes which tends to be closed to normal endothelial cells in the last week than the anodal group where (P<0.05), However the control group has shown a significant delay of healing than anodal group where (P<0.05). Conclusion: MES is an effective mean in wound healing, However starting treatment with cathodal electrode is effective than anodal one.</p>		
Key words	:	micro current electrical stimulation.
	:	Tendon healing.
	:	MES.
	:	Tendon injury.
	:	morphological changes.
Arabic Title Page	:	تأثير الأستقطاب للتيار المتناهي الصغر على التفاعل المورفولوجي بعد خياطه الأوتار.
Library register number	:	2451-2452.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Ahmed Mahmoud Mohamed Berry.
Title	:	Influence of computer use on muscular performance of shoulder in normal male subjects.
Dept.	:	Department of Basic Science.
Supervisors	:	Fatma Sedik Ameen.
	:	Neveen Abd-Elatif Abd-El Raouf.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: computer use increase the risk for development of musculoskeletal symptoms and disorders in the upper limb and shoulder neck region. Aims: to investigate the influence of computer use on shoulder muscle performance and to investigate the correlation between duration of daily computer use and shoulder muscle performance. Design of the study: Single repeated measurement design. Methods: thirty male subjects were assigned into two equal contrast groups: (A) fifteen computer users, (B) fifteen non-computer users. All subjects underwent isokinetic measurement of three muscle performance parameters: peak torque, work, and work fatigue index for two muscle groups (flexors and abductors) and at two angular velocities. A self estimated duration of daily computer use was obtained from all subjects of group (A). Results: for both muscle groups and at both angular velocities, peak torque and work in group (A) were lower than those in group (B) while work fatigue index in group (A) was higher than that in group (B). In addition, peak torque of both muscle groups was found negatively correlated with duration of daily computer use at both angular velocities. Conclusion: computer use decrease shoulder muscle performance. There is a negative correlation between duration of daily computer use and muscle performance.</p>		
Key words	:	Computer use.
	:	Isokinetic dynamometer.
	:	Muscle performance.
	:	Shoulder.
Arabic Title Page	:	تأثير استخدام الحاسب الآلى على الأداء العضلى للكتف فى الذكور الطبيعيين.
Library register number	:	2669-2670.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Aly Ezz El-Dine Aly.
Title	:	Energy Expenditure with Medial and Lateral Induced Patellar Taping.
Dept.	:	Department of Basic Science.
Supervisors	:	Samy Abd Elsamad Nassif.
	:	Ragia Mohamed Kamel.
	:	Azza Mohamed Atteya.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>The energy expenditure with medial and lateral induced patellar taping assess the efficiency of therapeutic tape as the changes of the level of energy expenditure in walking using various methods of treatment procedures and as a method of assessment of their efficiency during treatment using patellar taping techniques which become nowadays as a major concern with treatment in some cases with patellar dysfunction as well as the knee dysfunction. The purpose of this study was to examine: The influence of taping on energy expenditure compare between the lateral and medial patellar taping on energy expenditure. Subjects 45 Normal male subjects free from knee, cardiac and pulmonary dysfunction were included in this study. Methods two pieces of rigid tape applied a medial tracking and tested for the level of oxygen consumption, then lateral tracking of patella and tested for the level oxygen consumption finally tested without taping Results using P value 0.05 showed that comparing lateral taping with the medial one there was significantly higher energy expenditure in the lateral than in the medial one and by comparing the two taping techniques with no tape there was significantly higher energy expenditure in the lateral taping technique and with no tape more than in medial taping technique. Conclusion It was concluded that medial taping technique has less energy expenditure than lateral one or in case of without tape technique.</p>		
Key words	:	patellar taping.
	:	energy expenditure.
	:	the lateral patellar taping
	:	the medial patellar taping
	:	therapeutic tape.
Arabic Title Page	:	استهلاك الطاقة في حالات استئصال غطاء الركبة للداخل وللخارج بالشريط العلاجي اللاصق.
Library register number	:	2397-2398.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Amira Nagy Fawzy Mohammed.
Title	:	Effect of Kinesio Tape on mechanical low back pain.
Dept.	:	Department of Basic Science.
Supervisors	:	Amir Mohamed Morsy Saleh.
	:	Azza Mohamed Atya.
	:	Mahmoud Hafez Alam Elden.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Mechanical low back pain is reported to be a major health problem worldwide. Purposes: To investigate the effect of Kinesio Tape in treatment of mechanical low back pain patients. Study Design: pre test post test experimental design. Materials and methods: Thirty male patients with mechanical low back pain were involved, aged between 40-60 years. Patients were divided randomly into three equal groups, ten patients of each. Patients in the first group received Kinesio tape, Patients in the second group received Kinesio tape and McKenzie' spinal extension program and the third group received McKenzie' spinal extension program. Treatment was done 3 times a week for 4 weeks. Pain intensity, functional limitation and range of motion were measured before and at the end of four weeks. Results: There were significant differences within the three groups before and after treatment in the term of pain reduction as (p value, 0.0001), improvement of functional performance (p value, 0.0001) and lumber flexion ROM (p value, 0.0001). While there were no significant differences between the three groups as regard to lumber extension as(pvalue,0.96) and side bending range of motion as(p value,0.08). Conclusion: Kinesio tape was effective in management of mechanical low back pain patients as regard to pain reduction, improving functional disability and increasing flexion range of motion, McKenzie exercise was effective in management of MLBP patients as regard to pain reduction, improving functional disability and increasing flexion range of motion. The study showed more improvement to the patients received Kinesio taping and McKenzie' exercise than the other two groups.</p>		
Key words	:	Mechanical low back pain
	:	McKenzie' extension exercise.
	:	Kinesio Tape.
Arabic Title Page	:	تأثير الشريط اللاصق الكاينسيو على آلام الظهر الميكانيكية.
Library register number	:	2639-2640.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Eman Mahmoud Abd El Azeem.
Title	:	High versus low frequency sonography effect on morphological changes after tendon suture.
Dept.	:	Department of Basic Science.
Supervisors	:	Omaima Mohamed Ali Kattabie.
	:	Gihan Ibrahim Abo El Fotouh.
	:	Sahar Mohamed Adel.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>This study evaluated the effects of high frequency ultrasound vs. low frequency ultrasound on the morphological changes of Achilles tendon after suture. Thirty female albino rats were surgically transected Achilles tendons, were randomly and assigned into three groups (group 1 served as a control, group 2 was treated with high frequency US and group 3 was treated with low frequency US), with ten rats in each group. The treatments were administered with ultrasound day other day starting immediately from the day after injury. Wound size measurements were evaluated till complete healing as well as morphological changes of the Achilles tendons which examined under light-microscope. Results concerning wound size measurements every other day for both study groups showed that ultrasound has significant effect on wound healing during the study period where $p \leq 0.05$ as well as the morphological changes for both groups, however low frequency ultrasound (group 3) was better than high frequency ultrasound (group 2) throughout the study period (P value ≤ 0.01). These findings suggested that therapeutic ultrasound can enhance the wound healing of injured tendons.</p>		
Key words	:	ultrasound,
	:	Achilles tendon.
	:	morphological changes.
	:	Tendon injury.
	:	sonography effect.
Arabic Title Page	:	تأثير الموجات فوق الصوتية العالية التردد مقابل الموجات المنخفضة التردد على التفاعل المورفولوجي بعد خياطة الأوتار.
Library register number	:	2453-2454.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Heba El-Sayed Nabawy EL-Bably.
Title	:	Influence of backpacks on myoelectrical activities of upper fibers of trapezius in school students during walking.
Dept.	:	Department of Basic Science.
Supervisors	:	Wadida H. EL-Sayed.
	:	Dalia M. Mosaad.
Degree	:	Master.
Year	:	2011.
Abstract	:	<p>Background: there is a growing concern of the effects of ‘heavy’ backpack on school student s’ neck muscles activities which lead to muscle fatigue.The purposeof this study was to compare between normalized root mean square (RMS) of Electromyography (EMG) activities of upper fibers of Trapezius (UFT)(RT and LT) during walking carrying the modified double sided packwith that during walking carrying the ordinary backpackin preparatory school students. Subjects: thirty school students with mean age of 13.66±1.32 years were assigned in one group. Materials and Methods: measurements of the normalized RMS of EMG of UFT (RT and LT) were recorded, for each student, under three conditions: First while carrying no pack (reference isometric voluntary contraction), second while walking carrying the modified double sided pack for five min, third while walking carrying the ordinary backpack for five min with rest ten minutes after each test. Results: Duringwalking carrying the modified double sided pack, the normalized RMS of EMG of RT UFT was significantly less (Mean Rank 23.5 and median 1.113) thanduring walking carrying the ordinary backpack (Mean Rank 37.5 andmedian 1.314). Duringwalking carrying the modified double sided pack, the normalized RMS of EMG of LT UFT was significantly less(Mean Rank 24 and median 1.055) than during walking carrying the ordinary backpack (Mean Rank 37and median 1.53) with (Z value was -3.105 for RT UFT and Z- value was -2.883 for LT UFT and p<0.05).Discussion and Conclusion: themodified double sided pack significantly induced less normalized RMS of EMG activity of UFT(RT and LT) compared with the ordinary backpack style.</p>
Key words	:	upper fibers of trapezius.
	:	school Students.
	:	normalized RMS.
	:	Backpack.
	:	myoelectrical activities.
	:	walking.
	:	Backpacks.
Arabic Title Page	:	تأثير حمل حقائب المدرسة على النشاط الكهربى للعضله الرافعه للكتف فى طلاب المرحلة الإعدادية.
Library register number	:	2709-2710.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Heba Mohamed Abd Elshati.
Title	:	The effect of Low Power LASER Therapy on oral mucositis in head and neck cancer patients.
Dept.	:	Department of Basic Science.
Supervisors	:	Awatif Mohamed Labib.
	:	Magda Moustafa Kamal.
	:	Soheir Shehata Rezk –Allah.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Oral Mucositis is an inflammation of the mucosa of the mouth which ranges from redness to severe ulceration, it is a common complication of radiotherapy and chemotherapy occurring in about 60% of cancer patients. Symptoms of oral mucositis vary from pain and discomfort to an inability to tolerate food or fluids. It may also limit the patient's ability to tolerate either RTh or CTh, so it may delay the treatment and limit the effectiveness of cancer therapy. The purpose: of this study was to investigate the efficacy of LPL T on oral mucositis in head and neck cancer patients. Subjects: Forty patients with squamous cell carcinoma of head and neck, they had OM of various degrees following RTh Methods: Patients of both genders, smokers and non smokers their age ranged from 40 to 65 years old with a mean value of 53.77 and \pmSD of 5.94. They were randomly selected from the out patient clinic of oncology department, they received RTh after head and neck surgery by using cobalt 60 machine receiving conventional fractionation (1 session/day, 5 days/week) with fractionation size of 2 Gy and total irradiation dose of 5000- 6000 cGy for 5-6 weeks. All the patients were treated with LPLT (daily 5 days/week) for 2 weeks from the start of oral mucositis. Results: There was a significant reduction in the degree of oral mucositis in advance to non smoker females and was equal in young and older patients. Conclusion: LPL T is effective on reducing OM in H&N irradiated cancer patients.</p>		
Key words	:	Oral Mucositis.
	:	Low Power LASER Therapy (LPLT).
	:	Radiation Therapy (RTh).
	:	Head cancer.
	:	neck cancer .
	:	Cancer.
	:	Lasers.
Arabic Title Page	:	تأثير علاج الليزر ذي القوة المنخفضة على حالات التهاب الغشاء المخاطي في مرضى سرطان الرأس والعنق.
Library register number	:	2563-2564.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Jamaa Khalil Ahmed Alazomey.
Title	:	Manual Therapy versus Low Level Laser Therapy On Myofascial Pain.
Dept.	:	Department of Basic Science.
Supervisors	:	Awatef Mohammed Labib.
	:	Kadria Hosny Mohamed.
	:	
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>The purpose: The purpose of this study was to compare the effect of low level laser therapy and progressive pressure release on pain in myofascial pain syndrome of upper trapezius muscle. Subjects: thirty patients with active Myofascial trigger points in the upper trapezius muscle, their age range from 25-35 years participated in the study. Methods: subjects were randomly divided into 3 groups; Group A was treated with Low Level Laser Therapy and stretching exercise for upper trapezius muscle. Group B was treated with Progressive Pressure Release and stretching exercise for upper trapezius muscle. Group C; the control group, was treated with stretching exercise for upper trapezius muscle. The pain threshold (PT) was assessed by an electronic algometry. Measurements were obtained pre and post treatment. Results: There was a significant difference between groups A and C as P value was (0.02), and there was a significant difference between groups B and C as P value was (0.001) which indicate that groups (A) and (B) show improvement more than group (C). It also indicates that group (B) shows more improvement than group (A). Conclusion: Progressive Pressure Release was more effective than Low Level Laser Therapy in the treatment of Myofascial Pain Syndrome.</p>		
Key words	:	Trapzius muscle.
	:	low level laser therapy.
	:	digital algometer.
	:	progressive pressure release.
	:	myofascial trigger points.
Arabic Title Page	:	مقارنة بين تأثير العلاج بالليزر في معالجة الألم.
Library register number	:	2587-2588.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Khaled Mohamed Elsayed Hussien.
Title	:	Manual therapy versus pulsed ultra sound on myofascial pain.
Dept.	:	Department of Basic Science.
Supervisors	:	Awattef Mohamed Labib
	:	Marzouk Abdal Fatah EI-Lathy.
	:	Ibrahim Moustafa Moustafa Abu Amer.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>The purpose: of this study was to compare the effect of pulsed ultrasound and progressive pressure release on pain in myofascial pain syndrome of upper trapezius muscle. Subjects: thirty patients with MTrps in the upper trapezius muscle, aged 25-35 years participated in the study. Methods: subjects were randomly divided into 3 groups; Group A was treated with pulsed ultra sound beside stretching exercise and infrared; Group B was treated with progressive pressure release beside stretching exercise and infrared radiation and Group C, the control group, was treated with stretching exercise and infrared radiation. the pain threshold (PT) were assessed by an electronic algometer measurements were obtained pretreatment and post-treatment 3 days/week for 3 months. Results: There was a significant difference between groups A and C and P value was (0.04), and there was a significant difference between groups B and C as P value was (0.0001) which indicate that groups (A) and (B) show improvement more than group (C). It also indicates that group (B) show more improvement than group (A). Conclusion: progressive pressure release on MTrPs was very effective on pain in myofascial pain syndrome of upper trapezius muscle.</p>		
Key words	:	Myofascial pain syndrome.
	:	Myofascial trigger points.
	:	Progressive pressure release.
	:	Digital algometer.
	:	Pulsed ultra sound.
	:	Manual therapy.
Arabic Title Page	:	مقارنة بين تأثير العلاج اليدوي والموجات فوق الصوتية في علاج الألم.
Library register number	:	2559-2560.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	: Mai Raouf Mohamed Rageh.
Title	: Influence of Postero-Anterior Mobilization On Lumbar Intervertebral Movements In Mechanical Low Back Pain.
Dept.	: Department of Basic Science.
Supervisors	: Omaila Mohamed Ali Kattabie.
	: Omar Moawia Othman.
	: Ibrahim Moustafa Moustafa Abu Amer.
Degree	: Master.
Year	: 2011.
Abstract	: <p>Background: One of the most frequently used mobilization techniques for patients with mechanical low back pain (MLBP) is the central postero-anterior (PA) pressure. Although PA mobilization is frequently used to relieve MLBP patients' symptoms, the mechanism whereby it achieves these effects has been the subject of debate for many years. The purpose: to investigate the lasting effect of central PA mobilization on lumbar intervertebral movements, pain and functional levels in patients with MLBP. Subjects: 30 chronic MLBP patients, their age ranged from (19-35years) with a mean (25.16±5.20) years participated in this study. Patients were divided into two equal groups (study and control). Both groups received the traditional (infrared and ultrasound) treatment, in addition to central PA mobilization for the study group. Method: Sagittal rotation and translation, pain and functional levels were measured before and after 4weeks of PA mobilization as indicator of therapy effectiveness. Results: The PA mobilization produced improvement in the segmental rotation around X axis at level L1-L2, L2-L3 and L3-L4 (P <0.0001, 0.01and 0.001 respectively). And produced significant improvement in the segmental translation around Z axis at level L1-L2, L2-L3, L3-L4 and L4-L5 (P= 0.001, 0.002, 0.005 and 0.0005 respectively). For the control group, there was no statistically significant change in segmental rotation at level L1-L2, L2-L3, L3-L4 and L4-L5 (P= 0.81, 0.71, 0.86 and 0.85 respectively) and segmental translation level L1-L2, L2-L3, L3-L4 and L4-L5 (P= 0.11, 0.31, 0.1 and 0.9 respectively). The percentage of improvement in visual analogue scale and Oswestry disability index in the study group were 56.07% and 47.48% respectively in comparison with 10.84% 6.48% in the control group. Conclusion: It was concluded that central PA mobilization is a safe and efficient modality to improve intervertebral movements in MLBP.</p>
Key words	: LBP.
	: Translation.
	: Sagittal rotation.
	: Mobilization.
	: Lumbar Intervertebral Movements.
	: Mechanical Low Back Pain.
Arabic Title Page	: أثر التحريك المهارى فى اتجاه الخلفى أمامى على الحركة بين الفقرات القطنية فى الام أسفل الظهر الميكانيكى.
Library register number	: 2383-2384.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Maram Hassan Mohamed Zakkout.
Title	:	Comparison between different modes of TENS on myofascial pain syndrome.
Dept.	:	Department of Basic Science.
Supervisors	:	Awattef Mohammed Labib.
	:	Amira Hussin Draz
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Purpose: the purpose of the study was to compare the effects of Conventional TENS and Burst TENS on Myofascial trigger points (MTrPs) of the upper fiber of trapezius muscle. Methods: Thirty patients with active MTrPs in upper fiber of trapizus muscle from both genders participated in this study; their age ranged between 25-35 years. They were divided into three groups ;Group A (Test Group) which consisted of ten patients with mean age was (31.2±4.36) years, the mean values of their weight was (78.6±6.05) kilograms, and the mean values of their height was (167.2±4.87) centimeters and they received conventional TENS beside stretching exercise. Group B(test group) which consisted of ten patients with mean age was (29.4±3.23) years, the mean values of their weight was (77.4±7.02) kilograms, and the mean values of their height was (166.2±7.64) centimeters and they received burst TENS beside stretching exercise. Group C(control group) which consisted of ten patients with mean age was (29.7±2.49) years, the mean values of their weight was (81.2±8.25) kilograms, and the mean values of their height was (167.6±7.67) centimeters and they received stretching exercise only. Pain threshold was measured three times during the treatment duration, (before the treatment, immediately after (end of the second week), and 3 months after treatment) by algometer pressure. Results: There was a significant difference between conventional TENS and burst TENS on Myofascial pain syndrome in upper trapezius muscle. Conclusion: there is a different effect between different modes of TENS on painthrsold in Myofascial pain syndrome in upper fiber of trapezius muscle.</p>		
Key words	:	Myofascial pain syndrome.
	:	upper fiber of trapezius.
	:	different TENS modes.
	:	electrotherapy.
	:	TENS.
Arabic Title Page	:	المقارنة بين الأنماط المختلفة للتنبيه عبر الجلد في معالجة الألم.
Library register number	:	2367-2368.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Marwa salah Ahmed.
Title	:	Influence of Obesity in Sagittal Plan of Lumbar Spine.
Dept.	:	Department of Basic Science.
Supervisors	:	Maher El-Keblawy.
	:	Soha Talaat Hamed.
	:	Tarek Abd El-Rahman Ali Ammar
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Obesity and its effect in lumbar curvature and flexibility is a serious health problem worldwide. Purposes: This study investigates the influence of obesity in the sagittal plan of lumbar spine in normal and obese subjects. Subject: Forty subjects from both sexes (20 males and 20 females) were involved. Age between 20-40years old, divided into two equal groups, twenty subjects each (10 males and 10females). Method: Subjects in the first group (group A) were 20 normal subjects with body mass index (BMI) from 20 to 25 kg/m², while the second group (group B) were 20 obese subjects with body mass index (BMI) above 30 kg/m². Comparative design was applied to measure the lordotic angle using X-Ray and ROM of the lumbar spine using the spinal mouse. Results: The study revealed that there was a significant increase in the angle of lumbar lordosis in group (B) compared with those at group (A) and decrease in lumbar range of motion in group (B) compared with those at group (A) as the body mass index increases. Conclusion: There was a significant increase in the angle of lumbar lordosis and decrease in lumbar range of motion as the body mass index increases.</p>		
Key words	:	Lumbar Flexibility.
	:	Lumbar Curvature.
	:	Obesity.
Arabic Title Page	:	تأثير السمنة على المسطح الرأسي للفقرات القطنية.
Library register number	:	2701-2702.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mayada Ashraf Mahmoud.
Title	:	Influence Of Flat Foot On Ankle Proprioception.
Dept.	:	Department of Basic Science.
Supervisors	:	Omaima Mohamed Ali Kattabie.
	:	Soha Talaat Hamed.
	:	Abeer Abd El Rahman Mohamed.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Proprioceptive information plays an important role in joint stabilization, body coordination and proper function. Flat foot deformity may alter proprioceptive ability that may affect joint function and may predispose to joint injury .The purpose: To investigate the influence of flat foot on ankle proprioception. Subjects: Thirty males and females subjects with age ranged from 18-35 years old were assigned randomly into two equal groups: Group A (the study group) included 15 subjects (11females,4males) with second degree flat foot with mean age of (29.13 ± 2.74 years), weight (59.13 ± 6.8 Kg), height (164.8 ± 5.73 cm) and BMI(22.41 ± 1.93 Kg/m² and group B (the control group) included 15 normal subjects (12females,3males) with mean age of (30.33 ± 1.63 years), weight (58.93 ± 6.01 Kg), height (162.4 ± 6.88cm) and BMI (21.92 ± 1.81 Kg/m²). Method: lateral weight bearing radiographs were performed bilaterally for each subject in both groups to determine the degree of flat foot by measuring the talus first metatarsal angle. Active repositioning test of ankle planter flexion was measured by Biodex isokinetic dynamometer to assess proprioception joint position sense of ankle joint. Results: the study indicated that, there was no significant difference in ankle proprioception between both groups as $p= 0.8$. Conclusion: The study concluded that unilateral flexible second-degree flat foot does not have an effect on ankle proprioception.</p>		
Key words	:	Flat foot.
	:	proprioception.
	:	Ankle Proprioception.
Arabic Title Page	:	تأثير تفلطح القدم علي المستقبلات الحسية العميقة لمفصل الكاحل.
Library register number	:	2421-2422.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Mohamed Naeem Mohamed Salem.
Title	:	Effect of positional release technique in treatment of chronic low back dysfunction.
Dept.	:	Department of Basic Science.
Supervisors	:	Fatma Seddek Amen.
	:	Amir Mohamed Saleh.
	:	Khalid Fawzy Mustafa Abd Elkader.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Low back dysfunction (LBD) is a common problem which affects the majority of the population. Back problems tend to show the first symptoms before the age of twenty. Usually, the pain is acute and heals by itself in less than two months. The purpose of this study was to investigate the effect of positional release technique on patients with low back dysfunction. Subjects: Thirty two patients from both sexes were diagnosed with LBD, aged 30 to 55 years and were divided into two equal groups; sixteen patients each. Method: Subjects were randomly divided into 2 groups; group A (control group) received traditional physical therapy program that include (Infrared, Ultrasonic, Stretch and Strength exercises for back and abdominal muscles). Group B (experimental group) received infrared, ultrasonic and positional release technique; treatment was applied 3 days/week for 4 weeks. Pain was measured by Visual Analogue Scale, Lumbar range of motion was measured by Inclinator and Functional disability was measured by Oswestry disability scale. Measurements were taken at two intervals pre-treatment and post-treatment. Results: Data obtained was analyzed via paired and unpaired t-Test. There were statistical differences between the 2 groups, where the treatment group showed greater improvement in lumbar range of motion, pain and functional disability. Conclusion: Positional release technique is considered as an effective treatment for reducing pain, functional disability and increasing lumbar range of motion in individuals with low back dysfunction.</p>		
Key words	:	Low back dysfunction.
	:	Oswestry disability scale.
	:	Inclinometer.
	:	Positional release technique.
	:	chronic low back dysfunction.
Arabic Title Page	:	تأثير طريقة الأوضاع الأفراجية في علاج الخلل الوظيفي المزمن لأسفل الظهر.
Library register number	:	2485-2486.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Nehal Mohammed Farouk.
Title	:	Influence of cryotherapy on active repositioning accuracy of knee joint and leg extension force .
Dept.	:	Department of Basic Science.
Supervisors	:	Mohamed El-Gendy.
	:	Azza Mohamed Atya
	:	
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: cryotherapy plays an important role in treatment of acute athletic injuries. Purposes: to investigate the influence of cryotherapy on active repositioning accuracy of the knee joint and leg extension force. Study Design: A pre test post test design. Materials and methods: thirty normal male subjects were involved, aged between 18-26 years. They were represented in one group. All of the participants received cryotherapy for 10 minutes active repositioning accuracy and leg extension force were measured before, immediately after, and 30 minutes after cryotherapy using Biodex system 3 isokinetic dynamometer. Results: As regard to active repositioning accuracy of the knee joint there were no significant difference between measurements before and immediately after cryotherapy application ($p>0.05$) on the other hand there were a significant increase 30 minutes after cryotherapy application ($p<0.004$) and As regard to leg extension force there were no significant difference between before, immediately after, and 30 minutes after cryotherapy application ($p>0.05$). Conclusion: cryotherapy proved to have no effect on active repositioning accuracy immediately after application, increase active repositioning accuracy of knee joint 30 minutes after application and have no effect on leg extension force either immediately after or 30 minutes after application.</p>		
Key words	:	Cryotherapy.
	:	active repositioning accuracy of knee.
	:	leg extension force.
	:	knee joint
Arabic Title Page	:	تأثير البرودة على دقة إعادة وضع مفصل الركبة وقوة مد الساق.
Library register number	:	2537-2538.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Nesma Ahmed Helmy Ahmed.
Title	:	Influence of forward head correction on thoracic outlet syndrome.
Dept.	:	Department of Basic Science.
Supervisors	:	Omaima Kattabei.
	:	Samir El-Sayed Selim.
	:	Ibrahim Moustafa Moustafa Abo-Amer.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Forward head posture (FHP) is one of the most causal factors of thoracic outlet syndrome (TOS). Purpose: This study was conducted to investigate the effect of forward head correction on anterior head translation (AHT) distance, radiological shoulder balance parameters and pain severity in TOS. Subjects: Thirty patients aged from 20-40 years with mean (28.13±4.7) from both sexes divided into two groups with equal numbers. Material: Both groups received stretching exercises for pectoral muscles, scalene, sternocleidomastoid, levator scapulae, and upper trapezius muscles, and strengthening exercises for scapular retractor and cervical retractor muscles 3 sessions per week for 6 weeks, in addition to ambulatory head weighting on motorized treadmill with speed 2-3 mile per hour for 20 minutes for study group 3 sessions per week for 6 weeks. X-ray and visual analogue scale (VAS) were taken at two intervals pre-treatment and post-treatment. Results: There was significant difference between both groups post treatment in AHT distance (P=0.03), VAS (P<0.0001), and radiological shoulder balance parameters in terms of coracoid process height CPH (P=0.0009), clavicle angle CA (P=0.002), T1 (tilt) angle (P=0.0007), and clavicle rib cage intersect CRCI (P=0.049), For the study group, there was significant difference in all previous variables (P<0.0001), While for the control group, there was significant difference in AHT distance (P=0.0001), and VAS (P=0.0003), there was no significant difference in shoulder balance parameters. Conclusion: Ambulatory head weighting is considered as an effective structural rehabilitation method that correct FHP, shoulder imbalance, and decrease pain in TOS.</p>		
Key words	:	Thoracic outlet syndrome.
	:	Ambulatory head weighting.
	:	Radiological shoulder balance parameters.
	:	Forward head posture.
	:	head correction.
Arabic Title Page	:	تأثير تصحيح وضع الرأس الأمامي في متلازمة المخرج الصدري.
Library register number	:	2447-2448.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	: Noran Ahmed Mohamed.
Title	: The effect of soft lumbosacral orthosis on lumbar proprioception and trunk muscle strength in normal subjects.
Dept.	: Department of Basic Science.
Supervisors	: Maher Ahmed Elkeblawy.
	: Mohamed Hussein Elgendy.
	: Marzouk Abdelfatah Ellithy.
Degree	: Master.
Year	: 2011.
Abstract	: <p>The purpose of this study was to investigate the effect of 3 and 8 hours wearing of lumbosacral orthosis (LSO) for 21 days on lumbar proprioception (repositioning error) and isokinetic and isometric trunk muscle strength in normal female subjects. Subjects: Thirty healthy females with age ranged from 18 to 35 years old were participated in this study. They were assigned randomly into 3 equal groups (A, B and C); the study group (A) composed of 10 subjects with mean age of (24.4±4.92) years, mean height of (1.6±0.04) m, mean weight of (56.9±7.27) Kg, mean of BMI of (22.08±2.27) Kg/m². wore the LSO 8 hours/day for a period of 21 days, the study group (B) composed of 10 subjects with mean age of (25.7±6.14) years, mean height of (1.6±0.04) m, mean weight of (59.65±6.63) Kg, mean of BMI of (23.07±2.09) Kg/m² wore the LSO 3 hours/day for a period of 21 days and the control group (C) composed of 10 subjects with mean age of (25.5±5.38) years, mean height of (1.62±0.07) m, mean weight of (58.0±4.59) Kg, mean of BMI of (22.33±1.52) Kg/m², they did not wear the LSO. Methods: Assessment was done before and after 21 days of wearing of LSO in the study groups (A and B) and before and after 21 days for the control group (C). It included measurement of lumbar repositioning error and isokinetic and isometric trunk muscle strength. Results: The results of this study revealed significant decrease in lumbar repositioning error and significant increase in isometric and isokinetic trunk muscle strength in group (A), no statistical significant difference in lumbar repositioning error and isometric and isokinetic trunk muscle strength in group (B), significant difference between both study groups with significant decrease in repositioning error and significant increase in isokinetic and isometric trunk muscle strength in group (A) more than group (B) and no statistical significant difference in lumbar repositioning error and isokinetic and isometric trunk muscle strength in the control group. Conclusion: The findings of the current study revealed that wearing the LSO 8hours/day for only 21 days improved lumbar proprioception and trunk muscle strength. While wearing the LSO 3hours/day for only 21 days did not improve lumbar proprioception and trunk muscle strength.</p>
Key words	: Lumbosacral orthosis.
	: back pain.
	: trunk strength.
	: lumbar supports lumbar proprioception
	: muscle strength
Arabic Title Page	: تأثير الدعامة القطنية العجزية اللينة علي المستقبلات الحسية العميقة في المنطقة القطنية و قوة عضلات الجزع في الاشخاص الطبيعيين.
Library register number	: 2357-2358.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Rehab El-Sayed Morsi.
Title	:	Influence Of Ordinary Backpack Versus Modified Double Sided Bag On Dynamic Balance.
Dept.	:	Department of Basic Science.
Supervisors	:	Wadida H El-Sayed.
	:	Dalia M Mosaad.
Degree	:	Master.
Year	:	2011.
Abstract	:	

Background: The backpack is one of several forms of manual load carriage that provides versatility and is often used by hikers, backpackers and soldiers, as well as schoolchildren. Carrying a backpack induces deviations from natural postures that may affect the individual's ability to maintain balance and increased the stress at the lower back. **Purpose:** To compare between dynamic balance level while carrying no pack with that while carrying the ordinary backpack and modified double-sided bag style. **Methodology:** Repeated measure design was applied in this study .Thirty school children aged between 8 to 12 years underwent dynamic balance evaluation without carrying load and with carrying load (15% of body weight); once with ordinary backpack and another with modified double sided bag. **Results:** There were no statistically significant differences between all variables; Overall stability index, Anterior/Posterior stability index and Medial/Lateral stability index among the three previous conditions. **Conclusion:** Students weren't susceptible to balance disturbance when carrying any of the two bags with load 15 % of their body weight.

Key words	:	Backpack.
	:	Dynamic balance.
	:	Modified double-sided bag.
	:	Ordinary Backpack.
Arabic Title Page	:	المقارنة بين تأثير حقيبة الظهر المعتادة والحقيبة المعدلة ذات الجانبين على الاتزان الحركي.
Library register number	:	2705-2706.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Reham Mohamed Abd El-Rahim.
Title	:	Assessment of clinical instructor's communication skill by Liverpool scale in faculty of physical Therapy.
Dept.	:	Department of Basic Science.
Supervisors	:	Omaima Mohamed Kattabie.
	:	Ali Maher Khattab.
	:	Marzouk Mohamed Ellethy.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Communication skill is one of the most important Clinical Instructor's skills. Purpose: This study was conducted to assess the communication skills of the clinical instructors (CI) at Faculty of Physical therapy, Cairo University, during the (2010-2011) in order to identify areas of weakness as well as areas of strength to improve the quality of teaching-learning process. Subjects: four hundred and fifty four Students asked to fill out the scale in order to assess twenty two CI were divided into, Bachelor holders (B.Sc.) and master level group. Materials: Translated modified Liverpool communication skill scale (TMLCSAS) consists of fifteen items in Arabic language; every item was graded from zero to three. Results: There was a significant difference in Verbal communication skill ($t= 12.886$), Non-verbal type ($t= 11.008$) and total communication skill ($t= 12.884$) between both group with an areas of weakness and strengths. Conclusion: The Clinical instructors who hold the bachelor degree had less communication skill than those who enroll into the master level. So they need to take communication skills courses. The area of weakness must take in the future planning, in order to improve the quality of Physical Therapy Faculty.</p>		
Key words	:	Clinical instructor.
	:	Communication skill.
	:	Liverpool scale.
	:	Faculty of physical Therapy instructor's.
Arabic Title Page	:	مقياس ليفربول المعدل لقياس مهارات الاتصال الفعال لدى معيدى كلية العلاج الطبيعي.
Library register number	:	2543-2544.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sahar Mahmoud Mohamed El Sayed.
Title	:	Effect of aerobic training exercise on Natural Killer cells before and after puberty in girls.
Dept.	:	Department of Basic Science.
Supervisors	:	Neveen Abd El Latif Abd El Raouf.
	:	Soheir Shehata Rezaq Alla.
	:	Zinab Ali Hassan El Saadany.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Effect of exercise on the immune system becomes a very interesting area for research especially in children and period of puberty. Purpose: This study was conducted to investigate the effect of aerobic training exercise on Natural Killer (NK) cells before and after puberty in girls. Subjects: sixty healthy girls aged from 10-15 years divided into two equal groups. The mean age (11.0 ± 0.59) for group A (pre-pubertal) and (14.5 ± 0.78) for group B (post pubertal). Material: Both groups received aerobic training exercises by walking on treadmill with moderate intensity 60-75% of the maximum heart rate 3 sessions per week for 4 weeks. Blood samples were drawn from both groups before beginning the training and after 24 hours of completing last session to measure NK percentage by measuring its 3phenotypes: CD3⁺, CD16⁺, CD56⁺. Results: There was significant difference between before and after exercise in both groups in CD16⁺ and the dual (CD16⁺ + CD56⁺) (P=0.000) and between before and after exercise in measuring CD56⁺ in group A, in CD56⁺ not significant difference between before and after exercise in group B (P=0.110) between two groups there was significant difference in pre training level of CD56⁺ (P=0.02) and in post-training level of CD16⁺ and the dual CD16⁺ + CD56⁺ (P=0.000), there was no significant difference in post-training level of CD56⁺ (P=1.000) and also in pre-training level of CD16⁺ (p=0.266). Conclusion: The aerobic training exercise had a potent effect on NK cells percentage in healthy girls before and after puberty and the effect was clear on NK cells phenotypes: CD16⁺ and CD56⁺ and was greater in group A (pre-pubertal) than group B (post-pubertal). Exercise training can substitute the suppressive effect of estrogen on NK cells. So it was recommended with training of girls in pre& post puberty age and especially for pre-puberty girls.</p>		
Key words	:	immune system.
	:	Puberty.
	:	Aerobic exercise.
	:	Natural Killer cells.
	:	training exercise.
Arabic Title Page	:	تأثير برنامج التمرينات الهوائية على الخلايا الطبيعية الدفاعية في الفتيات قبل وبعد البلوغ.
Library register number	:	2713-2714.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Shereen Abd El Hafez Ahmed.
Title	:	Comparison between different wave lengths of low level laser irradiation on blood flow.
Dept.	:	Department of Basic Science.
Supervisors	:	Mohamed Hussain El-Gendy.
	:	Neveen Abd El-Latif.
	:	Badr Mohamed Hegazy
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: The vascular reactions during low intensity laser therapy are one of postulated mechanisms responsible for the observed clinical effect of laser irradiation. Purpose of the study: To investigate and compare the effect different LLLI wavelength on blood flow in healthy subjects. Materials and Methods: 30 healthy subjects whose age varied between 35 and 50 years old randomly selected from officers and staff members of El- Agoza Police Hospital. They were assigned randomly into two equal groups with mean age of 39.33 ± 2.63 years for group I and 38.73 ± 2.84 years for group II. Design of the study: A pre-test post-test (2X1) research design was used .Laser irradiation was applied over the popliteal fossa with 632 nm wavelength, frequency 25 Hz, power 20 mW and duration for 30 min (He-Ne laser) for group I and 904 nm wavelength, frequency 25 Hz, power 20 mW and duration for 30 min. (Infrared laser) for group II. Blood flow velocity and popliteal artery diameter were evaluated. Results: There was significant increase in velocity of blood flow, and corresponding increase in popliteal artery diameter with He-Ne Laser (632 nm). As well as infrared laser (904 nm), there was significant increase in velocity of blood flow and an increase of popliteal artery diameter. Conclusion: This study showed that There is no significant difference between the two types of laser with different wave lengths (He-Ne; 632 nm and infrared; 904 nm).</p>		
Key words	:	Low intensity laser therapy.
	:	Wavelengths.
	:	blood flow velocity.
	:	popliteal artery diameter.
	:	laser therapy.
Arabic Title Page	:	مقارنة بين اختلاف الأطوال الموجية لإشعاع الليزر المنخفض الشدة على سريان الدم.
Library register number	:	2541-2542.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Shereen Hamed Elwardany Mohamed.
Title	:	Electroacupuncture versus manual acupuncture in patients with knee osteoarthritis.
Dept.	:	Department of Basic Science.
Supervisors	:	Wadida H. Abd-Elkader Elsayed.
	:	Ahmed H. Hussein.
	:	Sahar Mohamed Adel.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Osteoarthritis (OA) is major cause of disability among adults. Nonpharmacologic therapy is the preferred first line of treatment of knee OA. Acupuncture is considered a potentially useful treatment for knee OA. Purpose: This study was conducted to compare the effect of electroacupuncture (EA) with manual acupuncture in patients with knee OA. Subjects: Thirty patients with knee OA; their age ranged between 38 and 50 years were divided into two groups. Materials: Single use stainless steel needles and EA device were used. Pain was measured by modified VAS, knee ROM was measured by Myrin goniometer and functional performance level was measured by The WOMAC scale. Methods: group (A) received EA and group (B) received manual acupuncture. Results: There was a significant difference between the two groups in post treatment measurement; Group (A) had significant decrease in pain intensity level (p-value 0.008) and the limitation of functional performance (p-value 0.04) than group (B). Group (A) had significant increase in knee ROM; active and passive flexion and active and passive extension with level of significance at $P < 0.05$ than group (B). Conclusion: Electroacupuncture treatment proved to be beneficial and had the upper hand over manual acupuncture in improving perceived knee pain, range of motion and decreasing the limitation of functional performance in patients with knee OA.</p>		
Key words	:	knee Osteoarthritis.
	:	manual acupuncture.
	:	Electroacupuncture.
Arabic Title Page	:	الوخز الكهربى بالإبر الصينية مقابل الوخز اليدوى بالإبر الصينية فى حالات الالتهاب العظمى المفصلى للركبة.
Library register number	:	2647-2648.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Zeinab Salah El Dein Mohamed.
Title	:	Effect of Aerobic Exercise on Patients with Major Depression.
Dept.	:	Department of Basic Science.
Supervisors	:	Amir Mohamed Saleh.
	:	Azza Mohamed Attya.
	:	Momtaze Mohamed Abdel-Wahab.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Background: Depression is a major psychological problem affecting mental and physical performance. There is a general belief that physical activity and Aerobic exercise have a positive effect on mood and depression. Purpose: The purpose of this study was to investigate the effect of aerobic exercises on patients with major depression. Subjects: Thirty patients of both sexes their ages ranged from 20-40 years were diagnosed with major depression. Methods: Patients were randomly assigned into two equal groups: The Group A (Study Group) 15 patients (4 male & 11 female) their mean age 32.26 year mean weight 74.33 kg. mean height 161.33 cm. and BMI 26.28 k.g./m²: received aerobic exercises and antidepressants medications and Group B (The Control Group) 15 patients (4 male & 11 female) their mean age 32.86 years and mean weight 70.8 k.g mean height 164.6 cm. BMI 26.19 kg/m²: received antidepressants medications only. The depression level was measured by Hamilton Depression Scale before the treatment, after two weeks and four weeks. Results: There were a significant differences within the two groups before and after the treatment. There were a significant differences between the two groups after the treatment where the study group showed greater improvement in the Hamilton Depression Scale. Conclusion: The aerobic exercises and antidepressant medications can be used as an effective treatment to decrease depression level in patients with major depression disorders.</p>		
Key words	:	antidepressants medications.
	:	major depression.
	:	Aerobic Exercises.
Arabic Title Page	:	تأثير التمرينات الهوائية علي مرضي الاكتئاب الشديد.
Library register number	:	2659-2660.