

Department of Basic Science

**Master Degree
2013**

Author	:	Ahmed Abd El-Monem Abd El-Hakim.
Title	:	Pulsed Magnetic Field versus Ultrasound in Treatment of Carpal Tunnel Syndrome.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abd El-Latif.
	2.	Hatem Abd El-Rahman Ahmed.
	3.	Azza Mohamed Atya.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Carpal tunnel syndrome (CTS) is one of the most common peripheral nerve entrapment disorders in the upper limb, causing sensory and motor impairment of hand functions. Purpose: to compare the effect of pulsed magnetic field with ultrasound in treating patients with CTS. Materials and Methods: Forty CTS patients (29 females and 11 males) aged from 30 to 50 years were assigned randomly into two equal groups. Group A: received pulsed magnetic field with nerve and tendon gliding exercises for the wrist 3 times per week for 4 weeks. Group B: received ultrasound plus the same exercises. Pain level, sensory and motor distal latencies of the median nerve (MSDL and MMDL), sensory and motor conduction velocities of the median nerve (MSCV and MMCV), and hand grip strength were assessed pre and post treatment by visual analogue scale, electromyography, and hand grip dynamometer, respectively. Results: There was a significant decrease in pain level, MSDL and MMDL, and increase in MSCV, MMCV and hand grip strength in both groups with significant difference between both groups in favor of group A. Conclusion: Pulsed magnetic field was more effective than ultrasound in treating patients with carpal tunnel syndrome</p>		
Key words	1.	Carpal tunnel syndrome
	2.	Pulsed magnetic field
	3.	Ultrasound
Arabic Title Page	:	المجال المغناطيسي المتقطع مقابل الموجات فوق الصوتية في علاج حالات ضيق النفق الرسغي.
Library register number	:	3617-3618.

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

Author	:	Ahmed Assem Abd El Rahim.
Title	:	Effect of aerobics exercise on patient,with anxiety disorder.
Dept.	:	Department of Basic Science.
Supervisors	1.	Amir Saleh.
	2.	Amira El Gendy.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background:Anxiety disorders are a major psychological problem affecting mental and physical performance. There is a general belief that aerobics exercise and physical activity have positive effect on mood and anxiety. Purpose:The purpose of this study was to investigate the effect of aerobics exercise on patients with anxiety disorder.Subjects:Thirty patients selected according to inclusive criteria from Sohag University, psychiatric hospital, their ages ranges from 25-45 years of both sexes were diagnosed as anxiety disorder. Methods: Patients were randomly assigned into two equal groups: The group A (Study Group): Fifteen patients (7 males and 8 females) received drug therapy and aerobic exercises for 4 weeks, 3 sessions/week. The mean \pm SD of age (28.4 ± 2.11) years, weight (72.5 ± 10.06) kg, height (164.8 ± 9.64) cm, and BMI were (26.65 ± 2.68) kg/m². And Group B (Control Group): Fifteen patients (9 males and 6 females) received drug therapy only. The mean \pm SD of age (29.6 ± 3.68) years, weight (75 ± 7.07) kg, height (166.9 ± 6.75) cm, and BMI were (26.87 ± 1.11) kg/m². The anxiety level was measured by Hamilton Anxiety Scale before and after the treatment. 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 Anxiety Scale. Conclusion: The aerobics exercises and anti anxiety medications can be used as an effective treatment to decrease anxiety level in patients with anxiety disorders.</p>
Key words	1.	Aerobic exercises.
	2.	anxiety disorders.
	3.	antianxiety medications.
	4.	Hamilton Anxiety Scale.
Arabic Title Page	:	تأثير التمرينات الهوائية علي مرضي القلق النفسي
Library register number	:	3379-3380

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

Author	:	Ahmed Atteia Elbalouky.
Title	:	Efficacy of mulligan technique on functional outcome of frozen shoulder.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen El-Sayyad.
	2.	Haytham El-Hafez.
	3.	Hassan Baraka.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Frozen shoulder is controversial by prediction and diagnostic criteria that are not sufficiently understood, many treatment strategies are applied but there is a gap literature in efficacy of Mulligan on adhesive capsulitis. Purposes: The purpose of study is to investigate the effect of Mulligan technique on: shoulder ROM of flexion, abduction, external and internal rotation, level of pain and functional outcome of frozen shoulder patients. Materials and methods: Thirty patients (age: 40-65 years old) of both sexes participated in this study; all subjects had unilateral frozen shoulder stage II (adhesive stage). Patients were divided into two equal groups Control group (group A): was consisted of fifteen subjects. They were received infrared radiation and ultrasound and traditional physical therapy. Study group (group B): was consisted of fifteen patients. They were subjected to the same protocol as control group in addition to Mulligan technique. The affected shoulder ROM was assessed clinically by electrogoniometer, pain level assessed by visual analogue scale and functional outcome level by simple shoulder test questionnaire at the beginning of the treatment and after four weeks at the end of treatment. Results: Showed that there was statistical significant difference at alpha level $P < 0.05$. Mean range of flex, abd., ext., and int. rotation in control group were respectively (97.67°, 79.73°, 28.53°, 24.0°) and became after treatment (115.27°, 99.8°, 35.07°, 30.4°) but in experimental group were (90.4°, 75.6°, 25.8°, 22.4°) and became after treatment (127.33°, 119.27°, 42.07°, 38.0°) also mean scores VAS in treatment for control and experimental group (8.45, 8.55) and became after treatment (5.01, 3.07) respectively also mean scores functional outcome level for abilities and disabilities from (3.07,8.33) and became after treatment (11.27,0.87) respectively for experimental group. Discussion and Conclusion: Mulligan technique may had significant effects on frozen shoulder patients regarding active shoulder ROM of flexion, abduction external and internal rotation, pain and functional outcome level.</p>		
Key words	1.	Mulligan technique.
	2.	frozen shoulder.
	3.	Electrogoniometer.
	4.	simple shoulder test.
	5.	visual analogue scale.
Arabic Title Page	:	تأثير موليجان تيكنيك على الحالة الوظيفية لتجمد مفصل الكتف.
Library register number	:	3385-3386.

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

Author	:	Ahmed Mohamed Ali Ahmed.
Title	:	Efficacy of denneroll traction on restoring normal sagittal configuration of lumbar spine in chronic mechanical low back pain.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen Mohamed El-Sayyad.
	2.	Ibrahim Moustafa Abo-Amer.
	3.	Amr Abd-Alla Azzam.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Change of sagittal configuration is one of the most common causes of chronic low back dysfunction (CLBD). Denneroll is an orthotic device designed to passively stretch lumbar lordosis. Purpose: This study was conducted to investigate the effect of denneroll traction on absolute rotatory angle (ARA), pain intensity and functional disability in CLBD patients. Subjects: Thirty patients of ages ranging from 25-40 years with mean (31.9±4.6) from both sexes, divided into two groups with equal numbers (experimental & control group). Method: Both groups received ultrasound (U.S), infrared radiation (I.R.R) and stretching exercise, additionally the experimental group received denneroll traction. All of the treatment procedures were conducted 3 times per week for 10 weeks. X-ray, visual analogue scale (VAS) and Oswestry disability index (ODI) scores were taken at two intervals: pre-treatment and post-treatment. Results: There were statistical differences between the two groups, where the experimental group showed greater improvement in ARA (P=0.0001), VAS (P=0.0001) and ODI scores (P<0.0001). While the control group showed significant improvement in VAS (P=0.0001), ODI (P<0.0001) and no significant difference in ARA (P=0.082). Conclusion: Denneroll traction in combination with U.S, I.R.R and stretching exercise are considered as an effective structural rehabilitation method that correct ARA, decrease pain intensity and improve functional disability in patients with CLBD.</p>
Key words	1.	: Denneroll traction.
	2.	Sagittal configuration.
	3.	Absolute rotatory angle.
Arabic Title Page	:	تأثير الشد بطريقة دني رول علي استعادة الشكل الطبيعي الجانبي للفقرات القطنية في حالات الأم اسفل الظهر الميكانيكيه المزمنه.
Library register number	:	3325-3326.

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

Author	:	Ahmed Mohamed Said Abou-Senna.
Title	:	Effect of lumbar mobilization on muscle activity in patients with mechanical low back pain.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abd El Latif.
	2.	Mohamed Taher Mahmoud.
	3.	Ahmed Mahmoud Kholeif.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Joint mobilization techniques are thought to affect muscle activity and benefit patients with lumbar mechanical pain and affect functional disability through the stimulation of joint mechanoreceptors which are believed to alter the pain-spasm cycle through the presynaptic inhibition of nociceptive fibers in associated structures and the inhibition of hypertonic muscles. Purpose: To investigate the effect of central postero-anterior lumbar mobilization on muscle activity in patients with mechanical low back pain. Materials and methods: 45 patients of both genders divided into three groups, each group contains 15 patients complaining from chronic mechanical low back pain for at least three months and aged between 30 to 50 years old. Group A (Study group) 15 chronic mechanical low back pain patients (10 females and 5 males) received PA lumbar mobilization plus traditional treatment which consisted of Ultrasonic and Infra red. Group B (Placebo group) 15 chronic mechanical low back pain patients (9 females and 6 males), the researcher put right middle finger on L3 spinous process for 2 minutes without applying force plus traditional treatment Ultrasonic and Infra red. Group C (Control group) 15 chronic mechanical low back pain patients (10 females and 5 males), received traditional treatment only (Ultrasonic and Infra red). Pain intensity and functional disabilities were measured before and after testing using Visual Analogue Scale and Oswestry Disability Index respectively. Surface EMG was used for measuring para spinal muscle activity. All patients received 3 sessions/week for 4 weeks. Results: This study found that a central postero-anterior mobilization on L3 for 2 min resulted in a significant reduction ($P < 0.05$) in the average surface EMG activity of the erector spinae musculature at L3 level (mean pre treatment value was 0.21 and post treatment value was 0.07) compared with the placebo treatment (mean pre treatment value was 0.2 and post treatment value was 0.12) and the control treatment (mean pre treatment value was 0.21 and post treatment value was 0.17) and also found improvement in functional ability and reduction in pain intensity compared with the placebo treatment and the control treatment. Conclusion: A central PA mobilization on L3 resulted in a statistically significant reduction in the average surface EMG activity of erector spinae musculature in mechanical low back pain patients and improvement in functional ability and reduction in pain intensity.</p>
Key words	1.	Mechanical low back pain.
	2.	Mobilization.
	3.	Electromyography.
Arabic Title Page	:	تأثير تحريك الفقرات القطنية على النشاط العضلي في المرضى اللذين يعانون من الأم أسفل الظهر الميكانيكية.
Library register number	:	3263-3264.

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

Author	:	Ahmed Samir Ibrahim Abdelfattah.
Title	:	Strain Counter Strain Technique versus KinesioTape in Neck Myofascial Pain Syndrome.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima Mohamed Ali Kattabei.
	2.	Samy Abdul-Sammad Nasef.
	3.	Ahmed Elsayed Ahmed Semaya.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Purpose: The purpose of this study was to compare the effects of strain counter strain technique to kinesio Tape technique on neck myofascial pain syndrome of upper trapezius muscle. Method: Forty five with myofascial pain syndrome (33 males and 12 females), with age ranged from 20 to 50 years old participated in this study. They were assigned into three equal groups each one has 15 subjects: group A received strain counter strain technique for 20 minutes session alternate days for 3 days. Group B received kinesio tape for 3 days. Group C (control group) did not receive any physical therapy modality. Pressure algometry, Neck disability index and Visual analogue scale were used to evaluate participants before and after application of strain counter strain and kinesio tape techniques, and for patients in the control group before and after 3 days. Results: Statistical analysis revealed that there was a significant increase in pressure pain threshold, decrease in pain level and function between before and after treatment with strain counter strain and kinesio tape in the two experimental groups with percentages of (143%, 90%, and 72%) (46%, 40%, and 52%) respectively. while there was no significant difference in the same measuring variables in than control. Comparison between groups revealed that there was a significant difference between groups and between each groups in, pressure pain threshold (PPT) and visual analogue scale (VAS) and neck disability index (NDI), P: probability\leq 0.05. Conclusion: Strain counter strain and kinesio tape techniques are effective methods of treatment of neck myofascial pain syndrome in advance to strain counter strain.</p>		
Key words	1.	strain counter strain.
	2.	kinesio tape.
	3.	myofascial pain syndrome.
Arabic Title Page	:	تقنيه التوتير والتوتير المضاد مقابل شريط كاينزيو في متلازمه الالم الليفي العضلى فى العنق.
Library register number	:	3349-3350.

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

Author	:	Amr Mohamed Ahmed Ali.
Title	:	Demonstration Of Nerve Root Function After Stretching Exercises In Lower Cervical Discogenic Radiculopathy.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatef Mohamed Labib, Ass.
	2.	Mohamed Abdel Fatah Yahia and.
	3.	Ibrahim Moustafa Moustafa.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background:Stretching exercises are considered as a good method aiming to overcome the complication of previous traditional treatment for cervical disorders.The purpose: This study was conducted to investigate the effect of stretching exercises on nerve root function,pain and functional abilities in cases of lower cervical radiculopathy through measuring the peak amplitude and distal latency of dermatomal somatosensory evoked potential(DSSEPs), Oswestry,and Visual analogue scale.Subjects: 30 patients suffering from lower cervical discogenic radiculopathy were participated in this study. Their age ranged from (20-40)years with mean(29 ±2.230). Patients were divided into two groups, each group included 15 patients. Both groups received conservative treatment in form of ultrasound and infrared radiation additionally, the study group received stretching exercises . Methods: Distal latency and Peak amplitude were measured pre and post treatment and measuring the pain by visual analogue scale and the functional abilities by Oswestry disability index.Results: Stretching exercises produced significant decrease in distal latency (p<0.005) and significant increase in peak amplitude(p<0.0005) and significant improvement in oswestry index(p< 0.0001) and reduction in visual analogue scale(p<0.0001).While the conservative treatment provide no significant change in the distal latency(p=0.089)and peak amplitude(p=0.084) and no significant change in oswestry index(p=0.04065) and no significant change in visual analogue scale(p=0.693).Conclusion: study was concluded that stretching exercises and ultrasound and infrared radiation are efficient modalities to improve the nerve root function and decrease the pain intensity level and improve the functional abilities in cervical radiculopathy.</p>
Key words	1.	Stretching exercise
	2.	Distal latency.
	3.	peak amplitude.
Arabic Title Page	:	ايضاح لوظيفة الجذر العصبي بعد تمارين الاطالة في اعتلال اعصاب الفقرات العنقية السفلية.
Library register number	:	3285-3286.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY ADEL ABD EL SALAM
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Author	:	Aziza Guma Abdulsameaa.
Title	:	Influence of low level laser Therapy on Myofascial Trigger Points of Plantar Fasciitis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohmmmed Labib.
	2.	Nassef Mohamed.
	3.	Abeer Abd El-Rahman Mohamed.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Planter fasciitis is a common problem characterized by deep pain in the planter aspect of the heel. Low-level laser Therapy (LLLT) is a relatively uncommon, non-invasive treatment for musculoskeletal pain, in which non-thermal laser irradiation is applied to sites of pain. Purpose: To investigate the effect of LLLT on pain intensity level, active ankle range of motion (ROM) and pain pressure threshold (PPT) of triggers points in patients with planter fasciitis. Subjects and Methods: Thirty patient with aged ranged between 30-45 years, mean age 38.6 ± 3.27 were assigned randomly into two equal groups. Group (A): control group, received sham laser over trigger points and Group (B): study group, received active Gallium-Arsenide I.R laser of 850-670 nm wave length with 3J / point for 90 sec. Both groups received selected physical therapy programs (transverse friction massage over trigger points and self stretch of calf muscles and planter fascia) 3 session / weeks for 6 weeks. Pain intensity level was measured by visual analogue scale (VAS), active ankle dorsiflexion and planter flexion R.O.M was measured by electrogonimeter and PPT of trigger points was measured by electronic digital algometer. All variables were measured before and after 6 weeks of treatment. Result: After treatment, all the outcome measurements had shown significant improvement in both groups ($P < 0.05$). When the improved parameters were compared between the two groups, there were significant differences after treatment in favor of active laser group ($p < 0.05$). Conclusion: LLLT plus selected physical therapy programs could be effective method to decrease pain, increase ankle range of motion and increase PPT of trigger points in patients with planter fasciitis compared with placebo laser pulse selected physical therapy programs.</p>		
Key words	1.	Planter fasciitis
	2.	low level laser Therapy
	3.	trigger point.
		Lasers.
Arabic Title Page	:	تأثير علاج الليزر منخفض الشدة على نقاط الألم العضلي اليفي لحالات التهاب اللقافة الأخصوية.
Library register number	:	3463-3464.

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

Author	:	Ehab Mohamed Ibrahim Essa.
Title	:	Osteopathic Muscle Energy Technique Versus Eccentric Contraction on Hamstring Flexibility.
Dept.	:	Department of Basic Science.
Supervisors	1.	Amir Mohamed Saleh.
	2.	Marzouk El-lythy.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Hamstring flexibility is considered an essential element of normal biomechanical functioning in sport and one of the most common injuries among karate athletes. The purpose of this study was to compare the influence of Muscle Energy Technique (MET) versus Eccentric contraction (ECC) on hamstring flexibility through knee extension range of motion (ROM) measurement. Subjects: Thirty athletes with hamstring muscles tightness, their age ranges 18 to 28 years were randomly divided into two equal groups; group A (MET) (N = 15) with mean age and \pmSD (20.13\pm1.59) years, group B (ECC) (N = 15) with mean age and \pmSD (19.93\pm1.43) years. Methods: MET group received post isometric relaxation (PIR) technique, ECC group received nordic hamstring exercise; treatment was applied three days/week for four weeks. Active Knee Extension (AKE) test values were recorded using digital photography and ROM values were calculated using AutoCAD software. Measurements were taken before and after 12 sessions. Results: There were statistical significance differences between the two groups post treatment, where the MET group showed 16.67 % percentage of improvement greater than the ECC group with 4.38 % percentage of improvement. Conclusion: MET is more effective than ECC for increasing hamstring muscles flexibility.</p>
Key words	1.	Osteopathic muscle energy technique.
	2.	Eccentric muscle contraction.
	3.	Hamstring muscles flexibility.
Arabic Title Page	:	الطاقة العضلية بتقنية الأوستيوباث في مقابل الإنقباض الإستطالي على مرونة عضلات الفخذ الخلفية.
Library register number	:	3455-3456.

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

Author	:	Dalia Samir Rushdy Ahmed.
Title	:	Influence of Microcurrent on Callus formation of Femur Fracture in Albino rats.
Dept.	:	Department of Basic Science.
Supervisors	1.	Amal Fawzy Ahmed.
	2.	Ibrahim Mohamed Ibrahim.
	3.	Azza Mohamed Atya.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Microcurrent therapy treatment has been shown clinically to shorten the fracture repair process and to induce healing of right tibial rats fractures. The purpose of the current study was to investigate the effect of microcurrent therapy on fracture healing in Albino rats. Materials and Methods: Twenty four albino rats tibia were fractured at their tibia and externally fixed, they were randomly assigned into two groups (first group served as a control, second group was treated with microcurrent, with nine rats in control group and fifteen rats in treated group and each group were subdivided into three subgroups according to the study period (second week, fourth week and sixth week post fracture). The treatments were administered with microcurrent every other day starting immediately from the day after fracture at a frequency 10Hz and intensity 80 microamps. Results: Healing rate were evaluated through radiological examination and histopathological changes throughout the study period. Analysis were made at 2nd, 4th and 6th week post fracture for both control and treated groups, radiological examination and histopathological changes showed approving effect of microcurrent on fracture healing as there was increase in callus formation in experimental group than the control group at different times of study period. These findings suggested that microcurrent therapy can enhance tissue healing.</p>
Key words	1.	Microcurrent therapy.
	2.	histopathological changes.
	3.	rats tibial bone.
	4.	fracture healing.
Arabic Title Page	:	تأثير التيار الدقيق على التكوين التكلسي في كسر الفخذ في الفئران البيضاء.
Library register number	:	3161-3162.

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

Author	:	Enas El Sayed Abd El Raziq.
Title	:	Effect of thoracic lymphatic manipulation versus splenic manipulation on T-lymphocyte in normal subjects.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida Hassan Abdel kader.
	2.	Soheir Shehata Rezk- Alla.
	3.	Asmaa Mouhamed Hosni.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: The thoracic lymphatic pump technique is a method of osteopathic manipulation used to increase the rate of lymph flow in order to help fight infection. It is believed that increased lymph flow is beneficial, as the lymphatic system is part of the immune system which enables the body to fight organisms and resist infection. CD4+ T-helper lymphocytes are part of the adaptive immunity. The purpose: To compare the effect of thoracic lymphatic pump technique versus splenic pump technique on the immune system ;T-helper lymphocyte (CD4+) percentage in healthy subject's. Subjects and methods: forty healthy subjects male and female participated in this study, their age ranged from 20-30 years; they were divided into two equal groups. 20 subjects in group (A) received thoracic lymphatic pump technique, and 20 subjects in group (B) received splenic pump technique. CD4+ percentage of T-helper lymphocytes was evaluated before and after manipulation using flow cytometry for both groups. Results: The results of study revealed that thoracic lymphatic pump and splenic pump produced a significant increase in CD4+ T-helper lymphocyte percentage post manipulation in addition to that there was no significant difference between the two techniques on CD4+ T helper lymphocytes percent. The significant level was set at 0.05. In conclusion: The thoracic lymphatic manipulative pump technique and splenic manipulative pump technique have increased T-helper lymphocytes CD4+ percent significantly. Both thoracic lymphatic manipulative pump technique and splenic manipulative pump technique have equal effect on CD4+ percent in peripheral circulation.</p>
Key words	1.	Thoracic lymphatic pump.
	2.	splenic pump.
	3.	T-helper lymphocytes.
Arabic Title Page	:	تأثير العلاج اليدوي للقفص الصدري مقابل العلاج اليدوي للطحال علي الخلايا المناعية.
Library register number	:	3389-3390.

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

Author	:	Haitham Mahmoud Saleh Mahmoud.
Title	:	Effect of Acute and Chronic Shoulder Impingement Syndrome In Shoulder Proprioception.
Dept.	:	Department of Basic Science.
Supervisors	1.	Maher Ahmed Elkablawy.
	2.	Yaser Hassan Elmlegy.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Purpose: the current study was carried out to assess and compare the effect of acute and chronic shoulder impingement syndrome on proprioception and pain sensibility. Methods: thirty patients with shoulder impingement syndrome were randomly divided in two equal groups (acute stage, chronic stage). The methods of assessment included Isokinetic testing device to conduct active repositioning test and McGill Pain Questionnaire. Results: the results showed that there was significant decrease in proprioception sense in patients in chronic stage than in acute stage but pain perception was more in patients in acute stage than chronic stage, conclusion: it was concluded that proprioception affection more in chronic stage of shoulder impingement syndrome than in acute stage but pain perception more in acute stage than chronic stage.</p>		
Key words	1.	Shoulder Impingement Syndrome.
	2.	Proprioception.
	3.	Accuracy Measurements of Proprioception.
	4.	McGill Pain Questionnaire.
Arabic Title Page	:	تأثير متلازمة انحرار الكتف الحادة والمزمنة على الاستقبال الحسي العميق في الكتف.
Library register number	:	3381-3382.

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

Author	:	Hesham Mahmoud Said Ahmed Ghorab.
Title	:	Effect of hip rotation on the activity of gluteus medius during hip abduction exercise.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abd El Latif.
	2.	Ahmed Ibrahim El-Erian.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: The Gluteus Medius (GM) muscle is strongly involved in the control of hip joint stability and is active when postural stability is challenged in the medio-lateral direction. Alterations in activation patterns of these muscles have been documented for patients suffering from low back pain, knee, and ankle injuries. Purpose: The purpose of this study was to investigate the effect of different hip rotation angles on myoelectrical activity of the three parts of the GM muscle during hip abduction exercise from side lying position in normal subjects with different angles of hip flexion. Methods: A single session, repeated-measures design. The activity of each GM part (anterior, middle, and posterior) was measured in 30 pain free volunteers, their age ranged from 19 to 28 years old, using surface electromyography during three rotation movements (neutral, 30° internal, and 45° external rotation) of the hip joint with different hip flexion angles(0°,45°, and 90°) from side lying hip abduction exercise. Muscle activation was expressed relative to Maximum Voluntary Isometric Contraction (MVIC). Differences in muscle activation were investigated using one-way repeated measures ANOVA with post-hoc Bonferroni analysis. Results: At neutral and 90° hip flexion, The activations of GM and its parts during the exercises were significantly different (p <0.001). At 45° flexion, there were no significant differences between the amplitudes of GM and its parts during exercises (p> 0.01). Conclusion: The highest EMG amplitude of the muscle and its parts was when the hip flexed 90° and internally rotated during abduction. The posterior part is more active than the middle and the anterior parts in a relation to MVIC. There were a significant differences between the different rotation movements of the gluteus medius muscle and its parts during abduction when the hip was in 90° and neutral hip flexion.</p>
Key words	1.	Gluteus Medius.
	2.	Hip abduction exercise.
	3.	Hip rotation.
	4.	Myoelectrical activity.
Arabic Title Page	:	تأثير دوران حركة الفخذ على العضلة الألية الوسطى اثناء تمرين ا لتباعد بين الفخذين.
Library register number	:	3503-3504.

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

Author	:	Joseph Wageeh Saweres.
Title	:	Efficacy of Glucosamine Sulphate, Chondroitin Sulphate, Methylsulfonylmethane (MSM) phonophoresis on patients with knee osteoarthritis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatef Mohamed Labib.
	2.	Fawzy Ahmed Halawa.
	3.	Soheir Shehata Rezk-Allah.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Objective: the purpose of this study was to investigate the efficacy of Glucosamine sulfate, Chondroitin sulfate and Methylsulfonylmethane phonophoresis on pain level, ROM, functional level in patients with knee osteoarthritis. Subjects and Methods: Thirty patients participated in this study and classified randomly into three equal groups: Group (A) received pulsed ultrasound therapy (50% duty cycle), 1 MHZ, 1.5 w/cm², 5 min using Glucosamine sulfate, Chondroitin sulfate and Methylsulfonylmethane gel as a coupling medium. Group (B) received topical application of Glucosamine sulfate, Chondroitin sulfate and Methylsulfonylmethane gel. Group (C) received traditional exercise program and the other two groups received the same traditional exercise program. The treatment program was conducted three times per week for four weeks. The patients were assessed for: pain level, range of motion, functional level using the Visual Analogue Scale, Modified electrogoniometer and The WOMAC (Western Ontario and McMaster Universities) Index of Osteoarthritis respectively. These measures were recorded two times: before the application of the treatment program and after the end of treatment program. Results: there was a significant improvement of pain level, range of motion, functional level for all groups, but the improvement was higher in the phonophoresis group than in the topical application group and both were better than the traditional exercise group. Conclusion: It could be concluded that adding the Glucosamine sulfate, Chondroitin sulfate and Methylsulfonylmethane gel by the use of phonophoresis to the traditional exercise program is most effective in improving pain level, range of motion, functional level outcomes in patients with knee osteoarthritis.</p>
Key words	1.	knee osteoarthritis.
	2.	Glucosamine sulfate.
	3.	Chondroitin sulfate.
	4.	Methylsulfonylmethane phonophoresis.
Arabic Title Page	:	فاعلية ادخال كبريتات الجلوكوزامين وكبريتات الكوندروتين والميثيل سلفونيل ميثان بالموجات فوق الصوتية في مرضى خشونة الركبة.
Library register number	:	3437-3438.

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

Author	:	Mahmoud Moustafa Aboul Fotouh
Title	:	Weight loss with different dietary systems combined with exercise training in obese females.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohammed Hussein EL Gendy.
	2.	Nebal Abdel RahmanAboul Ella.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Obesity is an excess accumulation of fat. There is worldwide increase in it among people of all ages, causes are multifactorial. Obesity is an established risk factor for numerous chronic diseases. Purpose of this study: was to investigate the effects of (low fat, low glycemic index (GI) and low carbohydrate (CHO))diet combined with exercise training, and to compare between the three groups. Methodology: Forty five obese females (age: 19-25 years old) participated in this study; their body mass index (BMI) was (30: 39.9 kg/m²). Their total body weight (TBW), BMI, body fat percentage (BF%) and Waist to hip ratio (WHR) was measured, pre and post using of dietary exercise program (DEP).Study Design: pre-test post-test design. Subjects were assigned randomly into three equal groups. (Group A) received a low fat diet, (Group B) received a low-GI diet and(Group C) received a low-CHO diet. Each group received its diet companied with exercise training. The three diet groups based on public Egyptian foods. Results: after12 weeks of DEP showed that there was significant difference in TBW, BMI and BF%, in Group C (-17.01 kg, -6.43 kg/m², -9.2%) respectively. in Group B (-16.73 kg, -6.14 kg/m², - 8.59%) respectively, in Group A (-7.2 kg, -2.76 kg/m², - 3.23%). There was no significant difference in WHR of all the three groups. In between groups there were significance difference in TBW, BMI, BF% between Group C and A (-8.69 kg, -3.5 kg/m², -6.3%) respectively, also in between Group B and A (-8.45 kg, - 4.3 kg/m², -5.83%) respectively, while there was no significance difference between Group C and B after using DEP. Conclusion: DEP had significance difference in measures of TBW, BMI and BF% in Group A, Group B and Group C while no significance difference in WHR of all groups. Group C has the greatest effect; there was no significance different between Group B and C.</p>		
Key words	1.	Dietary Exercise Program.
	2.	Obesity.
	3.	exercise training.
	4.	nutrition education.
Arabic Title Page	:	إنقاص الوزن باتباع أنظمة غذائية مختلفة مصحوبة بالتمارين الرياضية عند السيدات البدنيات.
Library register number	:	3495-3496.

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

Author	:	Manal Mohamed Hassan.
Title	:	Kinesiotape Versus Electromagnetic Field Effect on Proprioception in Knee Osteoarthritic Patients.
Dept.	:	Department of Basic Science.
Supervisors	1.	Ragia Mohamed Kamel.
	2.	Azza Mohamed Attia.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Knee osteoarthritis has been and continuous to be one of the most human being complex problem. Many therapeutic intervention are available for managing knee osteoarthritis but no single treatment modality seem to be superior to other. Purpose: The purpose of this study was to compare between the effect of kinesiotape and pulsed magnetic field on proprioception in knee osteoarthritis. Subjects: Thirty subjects (15 in group A and 15 in group B), mean age was (48.07 ± 4.88) years for group A and (49.40 ± 3.85) years for group B, mean weight (89.93 ± 15.78) kg for group A and (90.67 ± 8.98) kg for group B, and mean height (158.80 ± 5.69) cm for group A and (159.90 ± 5.25) cm for group B. subject in group (A) assumed kniesiotape and traditional treatment while patient in group (B) received pulsed magnetic field and same traditional treatment. Assessment methods includes visual analog scale to evaluate pain intensity, meenan scale to evaluate functional disability and isokinetic dynamometer to evaluate proprioception before and after the end of the treatment. Results: There was a statistically significant decrease in pain in group B than in group A with p-value equal (0.0400). There was significant improve in function in group B than in group A with p-value equal (0.0389). There was significant improve in proprioception in group B than in group A with p- value equal (0.0323). Discussion and Conclusion: Pulsed magnetic field decreased pain and improved knee function and proprioception more than kinesiotape, so it is recommended to be used in treatment program in knee osteoarthritic patients.</p>		
Key words	1.	Kinesiotape
	2.	Osteoarthritis
	3.	Proprioception
	4.	pulsed magnetic field
	5.	Electromagnetic Field.
	6.	Knee Osteoarthritic.
Arabic Title Page	:	مقارنة بين شريط الكاينسيو والمجال المغناطيسي وتأثيرها على المستقبلات الحسية العميقة في علاج حالات خشونة الركبة.
Library register number	:	3595-3596.

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

Author	:	Mohamed Abd El Salam.
Title	:	The Influence of Computer Monitor Tilting Angle on Head and Neck complaints.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida HassanAbd El Kader El sayed.
	2.	RagiaMohamedkamel.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Computer use increase the risk of musculoskeletal symptoms and disorders in the upper limb and neck region. Purpose:To investigate the influence of computer monitor tilting angle on cervical spine related disability level andcervical (flexion and extension)range of motion (ROM).Subjects: 80right handed subjects(male=40,female=40)participated in this study aged from 25 to 45 years ,work infront of computer for eight hours with adjustable chair ,mean age of 35.00±5.38 years, mean weight of 66.03±6.17kilograms and mean height of 167.16±7.75centimeters.Methods and materials: At first all monitor tilting angle for each participant was measured during their usual daily use then after one month cervical disability level was assessed byNeck DisabilityIndex and cervical (flexion and extension)ROM were measured by weighted needle inclinometer for each participant. The same80 participants fix theircomputer monitor at 130°for one month and then bothcervical disabilitylevel and cervical (flexion and extension) ROM reassessed again after one month. Results:A significant difference in the Wilcoxon matched pairs test of score of neck disability index before and after monitor angle was fixed at 130° (P-value =0.0001).Paired t-testshowed a significant difference in neck extension and flexion ROM between before and after monitor was fixed at 130°.Results showed that there was indirect relationship between computer monitor and cervical relateddisability andROM.Conclusion:Subjects have shown less limitation in cervical ROM with monitor set at 130°, and significant less neck related disability.</p>		
Key words	1.	Computer monitor.
	2.	Neck disability index.
	3.	Nclinometer.
	4.	Protractor.
	5.	range of motion.
	6.	cervical related disability.
Arabic Title Page	:	دراسة تأثير درجه ميل شاشه الكمبيوتر على مشاكل الرقبة.
Library register number	:	3239-3240.

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

Author	:	Mohmed Hussein El-gendy.
Title	:	Effect of Static Magnetic Field On Bone Healing In Vitro (Animal Study)/ Mohamed Mahdy Ali.
Dept.	:	Department of Basic Science.
Supervisors	1.	Kadria Hosny.
	2.	Ebrahim Mohamed Ebrahim.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: There is growing interest in the application of extremely low frequency magnetic forces for the enhancement of natural regenerative process. Static magnetic fields (SMFs) possess beneficial effects paralleling those of both pulsed and electric fields in treating both metabolic and fracture related bone pathologies. The purpose: to investigate the effect of static magnetic field on bone healing in vitro (animal study). Design of the study: Pre test-Post test control group design. Material and methods: thirty rabbits, Age (4-5 months), weight (2.5-3.5 Kg), with only diaphyseal transverse fracture without comminution in the shaft of radius, were assigned randomly into two equal groups. Group A (experimental group) received treatment using a small samarium cobalt magnet (15 x 3 x 2 mm) inserted 2 mm from bone adjacent to the fracture site. The magnet was secured by loosely over sewing surrounding muscles. Group B (control group) received the same procedures as group A except for the piece of demagnetized samarium cobalt. Dual Energy X-ray Absorptiometry was used immediately after fracture and after four weeks to measure bone density. Results: there was significant improvement in the experimental group as regard to bone healing in comparison to control group (P= 0.0001). Conclusion: it was concluded that static magnetic field can enhance bone healing in vitro.</p>
Key words	1.	bone healing.
	2.	DEXA.
	3.	magnetic stimulation.
Arabic Title Page	:	تأثير المجال المغناطيسي الساكن علي التئام العظام خارجيا في الحيوان (دراسة حيوانية).
Library register number	:	3327-3328.

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

Author	:	Mohamed Ibrahim fath-allah abd-elhay.
Title	:	Efficacy of different strengthening techniques on quadriceps muscle torque.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abdel latif.
	2.	Mohamed Taher Mahmoud El Desoky.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Quadriceps weakness associated with many structural and functional deficite in knee joint. Strengthening quadriceps is critical part in most of rehabilitation programs for knee joint but there is controversy exists in the literature about efficacy strengthening techniques for improving quadriceps muscle torque and which is the most effective technique between superimposed technique, Delorme progressive resisted exercises and Russian electrical stimulation. The purpose: this study was conducted to compare the efficacy of different strengthening techniques on quadriceps muscle torque . Subjects: sixty healthy male subjects their age (18-21) years divided into four groups, each group included 15 patients. Method: Group (A) received superimposed technique (simultaneous application of Russian electrical stimulation and Delorme progressive resisted exercises) group (B) received Delorme progressive resisted exercises group (C)received Russian electrical stimulation group (D) was a control group. Quadriceps peak torque values were measured by biodex isokinetic dynamometer pre and post training Results: Revealed that there was significant improvement in quadriceps muscle torque in group(A),(B) and (C) after applying the different strengthening techniques and p value was (0.0001) compared with group (D) which received no strengthening techniques and had no significant change. also group (A) show greater improvement when compared by group (B) and (C) with significant difference p value was (0.025) ,(0.0001) respectively Conclusions: superimposed technique is the most effective strengthening technique for improving muscle torque.</p>		
Key words	1.	strengthening techniques.
	2.	quadriceps muscle torque.
	3.	superimposed technique.
	4.	Russian current.
	5.	Delorme and progressive resisted exercises.
Arabic Title Page	:	فعالية تقنيات التقوية المختلفة على عزم العضلة الرباعية.
Library register number	:	3365-3366.

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

Author	:	Mohamed Mohamed Mazen.
Title	:	Pulsed magnetic field in shoulder impingement syndrome
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohamed Elgendy.
	2.	Azza Atya.
	3.	Yasser Elmelegy.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: shoulder impingement syndrome (SIS) is a frequent cause of shoulder pain and pulsed magnetic field was used as physical therapy modality for decreasing pain and has anti-inflammatory effect Purpose: the purpose of this study was to investigate pulsed magnetic field in shoulder impingement syndrome. Subjects: Thirty patients with chronic shoulder impingement syndrome aged from 30 to 50 years old. Design: pre and post-test design was for shoulder pain ,functional disability and shoulder range of motion . Methods: Patients were randomly assigned into two equal groups. The first group consisted of 15 patients with a mean age of 41.22 ± 7.67 years received conventional physical therapy program include ultrasound therapy and therapeutic exercises in form of strengthening exercise, stretching exercise for shoulder joint 3 times per week, every other day, for 4 consecutive weeks. The second group consisted of 15 patients with a mean age of 46.26 ± 8.05 years received the same conventional physical therapy program in addition to pulsed magnetic field 3 times per week, every other day, for 4 consecutive weeks. Results: Patients of both groups showed significant improvement in all the measured variables. However patients in second group showed a significant improvement in pain severity ,shoulder functional and shoulder abduction range of motion than first group. Conclusion: pulsed magnetic field had a significant effect on decreasing shoulder pain severity, shoulder functional disability and increasing shoulder abduction range of motion.</p>		
Key words	1.	pulsed magnetic field
	2.	shoulder impingement syndrome
Arabic Title Page	:	تأثير المجال المغناطيسي علي متلازمة اختناق أوتار الكتف.
Library register number	:	3593-3594.

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

Author	:	Mostafa Mohamed Sayed Attya.
Title	:	Effects of direct current and ultrasonic on Ehrlich Solid Tumor.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abdel-Latif Abdel-Raouf.
	2.	Ahmed Ebrahim Elerian.
	3.	Eman Bakr Mohamed.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Purpose: To determine the effects of direct current and ultrasonic on Ehrlich solid tumor. Study Design: It is a randomized controlled study. Methodology: The experiment was conducted in experimental animal lab of the biology department of national institute of cancer, Cairo, Egypt, through March 2012 to May 2012. This investigation was done to forty five male mice bearing solid tumor (Ehrlich tumor), their ages ranged from 6-8 weeks their weights ranged from 20 - 25 g, before the treatment procedure and after the incubation of tumor to the mice, two of the mice died from gastrointestinal microbial disease, after ten days of incubation the forty three mice have been divided into four groups and every group have been subdivided into two subgroups according to the time of excision; stage one: sacrificed a week after the time of intervention (1st week), stage two: sacrificed after two weeks of the time of intervention (2nd week). The main four groups are: group A treated with direct current, group B treated with ultrasonic, group C treated with both direct current and ultrasonic, group D was control group was taken sham therapy. Comparison between groups in each stage was done for measuring tumor necrotic area length and tumor cell viability through histopathology examination, and for measuring Vascular Endothelial Growth Factor (VEGF) expression through immunohistochemistry examination. Also comparisons in-between treated groups of both stages were done. Results: The study revealed that there were significant differences in the measurements of tumor necrotic area length between treated and control groups in 1st stage were (1268.5μm \pm236.04), (1077.6μm \pm89.74), (1566.5μm \pm252.98) and (564.25μm \pm86.98) for groups A, B, C & D respectively and in 2nd stage were (785.37μm \pm89.55), (748.29μm \pm97.95), (1139.5μm \pm149.94) and (558.40μm \pm76.46) for groups A, B, C & D respectively p value \leq 0.05. For tumor cell viability and VEGF expression there was highly significant difference between treated and control groups in 1st and 2nd stages. Also there were significant differences in the measurements of tumor necrotic area length in between experimental groups group A were (1268.5μm \pm236.04) and (785.37μm \pm89.55) 1st and 2nd stages respectively, group B were (1077.62μm \pm89.74) and (748.29μm \pm97.95) 1st and 2nd stages respectively, group C were (1566.50μm \pm252.98) and (1139.50μm \pm149.93) 1st and 2nd stages respectively. And there were no significant differences in between 1st and 2nd stages for tumor cell viability and VEGF. Best results were with group C. Conclusion: direct current destroy tumor cell and ultrasonic particularly targeted the vascular structures of tumor, and may prevent further tumor growth.</p>		
Key words	1.	Direct current.
	2.	Ultrasonic.
	3.	Antitumor.
	4.	VEGF.
	5.	Angiogenesis.
	6.	Angiogenesis.
	7.	tumor cell viability.
Arabic Title Page	:	تأثيرات التيار المستمر و الموجات فوق الصوتية علي ورم ايرلش الصلب .
Library register number	:	3405-3406.

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

Author	:	Neveen Abd El Latif.
Title	:	Relationship between pain, proprioception, and muscle strength in mechanical low back pain.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohamed Taher Mahmoud.
	2.	Ahmed Mahmoud Kholeif.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background:Low back pain is a leading cause of disability and it has a significant economic impact not only on lost productivity but also on healthcare expenditures. There is shortage in studies that investigates the relationship between the degree of pain severity, degree of functional disability, proprioception and muscle strength in chronic mechanical low back pain. Purpose: To investigate the relationship between the degree of pain, degree of functional disability (as a consequence of pain) and both proprioception, and muscle strength in chronic mechanical low back pain. Methodology:One hundred patients, complaining from mechanical low back pain for at least three months and aged between 25 and 45 years old with body mass index ranged between 24 and 30kg/m² participated in the study. The degree of Pain and the degree of functional disability were measured before testing using visual analogue scale and Oswestry Disability Index respectively. Biodex system 3 Isokinetic dynamometer was used for measuring active repositioning accuracy and isokinetic flexion and extension strength at a velocity 120 degrees/sec. Results:Revealed that no significant relationship was found between the degree of pain severity, the degree of functional disability, and both proprioception and muscle strength in chronic mechanical low back pain. Conclusion:proprioceptive training and muscle strengthening exercises are essential for all patients complaining from chronic mechanical low back pain whatever the degree of that pain.</p>
Key words	1.	Mechanical low back pain.
	2.	proprioception and lumber repositioning accuracy.
	3.	Pain.
	4.	muscle strength.
Arabic Title Page	:	العلاقة بين الألم والمستقبلات الحسية العميقة وقوة العضلة في آلام أسفل الظهر الميكانيكية.
Library register number	:	3145-3146.

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

Author	:	Rania Gamal Habib Boles.
Title	:	Effect of Mobilization With Movement Versus Proprioceptive Training On Individuals With Functional Ankle Instability.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida Hassan Abd El-Kader El-sayed.
	2.	Abd El- Aziz Mohamed Abd El-Aziz El-Singery.
	3.	Soheir Shehata Rezk-Allah.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Functional instability of ankle has described as the subjective sensation of giving way or feeling joint instability after repeated episodes of ankle sprain. Purpose of the study is to compare the effect of mobilization with movement (MWM) technique versus proprioceptive training on proprioception accuracy level and functional ability level in patients with unilateral functional chronic ankle instability (CAI).Methods: Thirty subjects (females and males) with unilateral chronic ankle instability were assigned randomly into three groups, the mean age of group A was 26.3 ± 4.02, of group B was 26.4 ± 2.83 and of group C was 27.7 ± 3.19 years. Group A received mobilization with movement and early functional rehabilitation program (EFRP), group B received proprioceptive training and EFRP, group C received EFRP only. Treatment was applied for four weeks, three sessions/week. Measurements were conducted: (1) The proprioceptive accuracy level using isokinetic device (2) Functional ability assessment using ankle joint functional assessment tool, It was performed before treatment and four weeks after treatment. Results: Both mulligans and proprioceptive training have increased the proprioceptive accuracy level. The percentage of improvement of proprioceptive accuracy level from maximum inversion to neutral position and from maximum inversion to 15° eversion was 67.03% and 59.08%, 43.62% and 39.15%, and 22.73% and 19.26% for group A, B and C respectively. Ankle joint functional assessment tool revealed that mobilization with movement, proprioceptive treatment and EFRP had significantly improved the functional abilities in CAI individuals. There was a significant difference among the three groups ($p = 0.0001$). There was a significant difference between group A, B ($p = 0.0001$), between group A, C ($p = 0.0001$) and between group B, C ($P = 0.004$). These show that mobilization with movement is superior to proprioceptive training in improving ankle functional ability. Conclusions: The results of the current study revealed that mobilization with movement is more effective than proprioceptive training in the treatment of chronic functional ankle instability.</p>
Key words	1.	Proprioception
	2.	Mobilization with movement
	3.	ankle instability
	4.	Training - Functional Ankle Instability.
Arabic Title Page	:	تأثير التليين مع الحركة مقابل تدريب المستقبلات الحسية على الأشخاص الذين يعانون من الخلل الوظيفي للكاحل.
Library register number	:	3611-3612.

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

Author	:	Roshdy Mohamed Kamel Moustafa.
Title	:	Efficacy Of Posteranterior Mobilization On Nerve Root Function In Patients With Cervical Disc Prolapse.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohamed Hussein EL-gendy.
	2.	Ibrahim Moustafa Abu Amer.
	3.	Husam Salah Mourad.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: The cervical spine is an area of the body that has great mobility and influences on the neurological mechanisms throughout the body. There is lack of literature concerning the effect of posteroanterior mobilization on nerve root function in patients with cervical disc prolapse. The purpose: to investigate the efficacy of posteroanterior gliding of lower cervical spine on nerve root function and neck function in patients with cervical disc prolapse. Design of the study: A pretest-posttest control group design was used in this study. For every patient, DSSEPs of C6 and C7 were recorded by electromyography before and after treatment to represent nerve root function. Copenhagen neck functional disability scale was used to assess neck function. Material and Methods: Thirty patients with lower cervical intervertebral disc prolapse and radiculopathy from both genders participated in the study, and divided into two groups with mean age of 40.1 ± 5.51 years. The control group received conventional treatment in form of ultrasound therapy and infrared radiation. Additionally, the experimental group received posteroanterior mobilization. Results: Control group reported no significant change in peak amplitude of DSSEPs ($P=0.105$), latency ($P= 0.3408$), but there was improvement in neck function (percentage of change=14.2 %). The experimental group reported statistical significant change in peak amplitude of DSSEPs ($P=0.0025$) with percentage of improvement 65.19%, improved neck Function where the percentage of changes in neck functional disability scale was 49.13%. There was no statistical significant change in latency between groups, where $P=0.9725$, but within experimental group there was minimal improvement in latency with a percentage of change 5.18%. Conclusion: It was concluded that posteroanterior mobilization of cervical spine had positive effect on nerve root function and neck function in patients with cervical disc prolapse and radiculopathy.</p>		
Key words	1.	Mobilization.
	2.	Nerve root function.
	3.	Disc prolapse.
Arabic Title Page	:	تأثير التحريك المهاري للفقرات العنقيه السفلي في الاتجاه الخلفي الامامي علي وظيفة جذع العصب في مرضي الانزلاق الغضروفي العنقي.
Library register number	:	3127-3128.

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

Author	:	Sabah Mohammed Alkady.
Title	:	Electroacupuncture versus pulsed electromagnetic field efficacy in the management of knee osteoarthritis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Haytham Elhafez.
	2.	Khaled Ayad.
	3.	Kadrya Battesha.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Osteoarthritis of the knee is reported to be a major health problem worldwide and a main source of disability and handicap, which leads to considerable socioeconomic costs. It affects more than 5,500,000 Egyptian citizen with various degrees of severity Purpose: to compare between electroacupuncture and pulsed electromagnetic field efficacy in the management of knee osteoarthritis. Study Design: Three groups pre and posttest design. Subjects: Thirty patients with moderate bilateral knee osteoarthritis from both sexes were selected, aged between 45-55 years. They were selected by simple random method from outpatient clinic of police force hospital in Tanta. They were divided into three equal groups, ten patients each. Materials and methods: Patients in the first group received electroacupuncture in addition to a traditional exercise program. Patients in the second group received pulsed electromagnetic field in addition to a traditional exercise program plus ultrasound. Patients in the third group (control group) received a traditional exercise program plus ultrasound. Treatment was done 3 times a week for 4 weeks. Range of motion, pain level and functional performance were measured before and after treatment by universal goniometer, Visual analogue scale and WOMAC questionnaire respectively. Results: There were significant statistical differences within the three groups before and after treatment and between the three groups after treatment. Group (B) was highly significant statistical difference group among the 3 groups for Knee ROM with the mean difference(12.8), for pain level (4.9) and for functional performance (29.0). Conclusion: Pulsed electromagnetic field may be beneficial and had the upper hand over electroacupuncture in improving range of motion, functional performance and perceived knee pain in patients with knee osteoarthritis.</p> <p>Key words:, ,</p>
Key words	1.	Knee osteoarthritis.
	2.	Electroacupuncture.
	3.	Pulsed electromagnetic field.
Arabic Title Page	:	مقارنة بين الوخز الكهربائي والمجال الكهرومغناطيسي المتقطع في علاج خشونة مفصل الركبة.
Library register number	:	3451-3452.

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

Author	:	Shahenda Mohamed Eissa Abd El-Rasol.
Title	:	Effect of Muscle Energy Technique on anterior pelvic tilt in lumbar spondylosis patients.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abd El Latif.
	2.	Enas El Sayed Abu Taleb.
	3.	Ahmed Mahmoud Kholeif.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: the main biomechanical functions of the pelvis are to transmit forces from the trunk to the lower limb, so stable neutral position of the pelvis must be attained to provide the proper posture alignment of the spine. Because the anterior pelvic tilt disturb this neutral position, it results in a forward leaning or hyperlordotic curvature and this affect body balance and stability through disturbing the link between muscles, ligament and fascia and doesn't allow the center of gravity and base of support met at one line. Purpose: To investigate the effect of muscle energy technique (MET) on anterior pelvic tilt in patients with lumbar spondylosis. Methodology: A pre-test post-test research control group design. Thirty patients with anterior pelvic tilt from both sexes were involved, aged between 35 to 50 years old. The patients were divided into two equal groups, each one composed of 15 patients. Patients in the study group received MET, Ultrasound (U.S) and Infrared (I.R.), while the control group received U.S and I.R only. The treatment was done 3 times/week for 4 weeks. Pelvic angle was measured by palpation meter (PALM), Pain severity was measured by the visual analogue scale (VAS) and functional disabilities were measured by the Oswestry disability index (ODI). All variables were measured before and after treatment. Results: revealed that there was statistical significant improvement of anterior pelvic tilt angle, pain severity, and functional disabilities ($p=0.0001$) of group A (study group) than group B (control group). Conclusion: MET considered one of physical therapy program in treatment of lumbar spondylosis patients with anterior pelvic tilt. The study group fulfilled greater improvement in all measured variables than the control group.</p>		
Key words	1.	anterior pelvic tilt.
	2.	anterior pelvic tilt.
	3.	muscle energy technique exercise.
Arabic Title Page	:	تأثير أسلوب الطاقة العضلية على ازاحة الحوض الامامية فى مرضى التهاب الفقرات القطنية .
Library register number	:	3129-3130.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY ADEL ABD EL SALAM
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Author	:	Sherif Moustafa Mahmoud Ramadan.
Title	:	Efficacy of Cranial Base Release on Chronic Tension Headache.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatef Mohamed Labib.
	2.	Marzouk Abd El-Fattah El-Lythy.
	3.	Kamel Hamoda Morsy.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Tension headache is a very important problem in our society, there is lack of literature concerning the efficacy of cranial bases release on chronic tension headache. Purpose: The purpose of the study was to investigate the efficacy of cranial base release on chronic tension headache. Materials and methods: This study was conducted in Physical Therapy Department in El Gomhorya outpatient clinic to investigate the efficacy of cranial base release on chronic tension headache treatment. Forty volunteer patient's twenty males and twenty females who had tension headache were participated in this study. They were randomly divided into two equal groups, each group contain ten males and ten females. The first experimental group (A) received hot packs application, cranial base releases, stretching and static neck exercises. The second control group (B) received hot packs application, stretching and static neck exercises. Results: There was a statistical significant difference in the paired t-test between pre and post treatment pain threshold for both treatment groups, P-value was ($p < 0.05$), for treatment Group (A) The mean and SD pre treatment pain threshold was (3.5050 ± 0.4084), the mean and SD post treatment pain threshold was (6.665 ± 0.536) the improvement percentage was 90.3%. For treatment Group (B), the mean and SD pre treatment pain threshold was (3.760 ± 0.586), the mean and SD post treatment pain threshold was (5.695 ± 0.626), and the improvement percentage was 51.6%. Conclusion: Cranial base release has a great effect on chronic tension headache improvement.</p>
Key words	1.	Chronic tension headache.
	2.	cranial base release
Arabic Title Page	:	فاعليه تحرير قاع الجمجمه على الصداع التوتري المزمن من الباحث.
Library register number	:	3401-3402.

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

Author	:	ShimaaTaha Abu El Kasem.
Title	:	Nerve Root Function at Different Traction angles in Patients with Discogenic Cervical Radiculopathy.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima Mohamed Ali Kattabie.
	2.	Moustafa Abu Amer.
	3.	Amr Hassan El-Hasany.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: The traction angle is an important variable which affect traction outcomes. Although many attempts were done, the effective traction angle has not been fully clarified. The purpose: This study was conducted to investigate the effect of different angles on nerve root function in patients with chronic lower discogenic cervical radiculopathy. Material and methodes: 45patients suffering from lower discogenic cervical radiculopathy. Their age ranged from 40 to 50 years with a mean (44.45 ±2.92). Patients were divided into three equal groups A,B &C. Group (A) received static mechanical traction at angle 24° flexion of cervical spine for 20 minutes, group (B) received static mechanical traction at angle 15° extension of cervical spine for 20 minutes and group (C) received static mechanical traction at neutral position 0° of cervical spine for 20 minutes. Peak to peak amplitude and latency of dermatomal somatosensory evoked potential (DSSEPS) was measured before and at the end of traction time. Results: within group analysis by paired t-test revealed that there was improvement of amplitude at group (B) where percentage of change was(68.9%) (p<0.05), Also reveled markedly decrease of amplitude at group (A) as percentage of change was (29%)(P>0.05) and reveled decrease in amplitude at group(C) where the percentage of change was (13.9%)(P>0.05). Paired t test revealed no statistical significant difference of latency within each group. Between group analysis adjusted to pre scores values (ANCOVA) revealed statistical significant difference of amplitude between groups where F=26.144, P value <0.005, and also revealed no statistical significant difference of latency between the three groups as F = 0.552, & P value=0.580 conclusion: It was concluded that extension traction angle is effective traction angle as it improve nerve root function.</p>
Key words	1.	Discogenic Cervical Radiculopathy.
	2.	Traction angle.
	3.	Dermatomal somatosensory evoked potential (DSSEPs).
Arabic Title Page	:	وظيفة الجذر العصبى فى زوايا الشد المختلفه لمرضى اعتلال الجذور العنقيه الغضروفى .
Library register number	:	3241-3242.

Author	:	Sara Abd Al-Samea Ahmed Badr.
Title	:	Efficacy of compressive ischemic pressure release on pectoral's trigger points following open heart surgery.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima kattabei.
	2.	Wafaa Anwar El-Aroussy.
	3.	Sherien Hassan.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Open heart surgery is considered one of the most common surgeries all over the world. Incisional pain, restricts the movement of chest leads to the development of trigger points in pectoral muscles which aggravate patient's pain and limit chest movement in turn hence lung functions. Purpose: of this study was to establish the efficacy of compressive ischemic pressure release of trigger points in pectoral muscles on chest pain, lung volumes & capacities in cardiac patient post open heart surgery. The results of this study may provide the physiotherapist with basic information that helps those patients and therapists in treatment and rehabilitation. So that may decrease the risk of cardiopulmonary complications and hospitalization period. Subjects: Forty patients with open heart surgery, with sternal-approach maneuver. They were assigned randomly into two equal groups, the first group is the experimental group (A), patients in this group received compression ischemic pressure release of pectoral's muscles trigger points about 5 points for each side in addition to diaphragmatic deep breathing exercise. Patient in the second group which is the control group (B) received breathing exercise only. Methods: The following parameters including pain severity and pulmonary functional capacity test were measured before and after the treatment program after 6 session of treatment according to pain severity for each patient. Results: The results showed significant improvement in all parameters in group A compared with group B, Group (A)The mean pre treatment pain threshold(in Newton) was (7.06 ± 1.6), The mean post treatment pain threshold was (28.2 ± 0.79) The improvement percentage was 95.3%. For treatment Group (B), the mean pre treatment pain threshold was (8.43 ± 2.16), the mean post treatment pain threshold was (10.48 ± 2.24), and the improvement percentage was 41.6%. P-value was $(p < 0.0001)$, and for pulmonary functions in experimental group there were a significant improve in slow vital capacity (in mL)with mean from (47.4 ± 12.56) to (78.95 ± 7.88), forced vital capacity (in Liter)from (1.76 ± 0.46) to (2.967 ± 0.47), forced expiratory volume in 1 sec (in mL/sec)with mean from (49.2 ± 13.8) to (81.76 ± 7.05), ratio of FEV₁/FVC (in %)with mean from (84.6 ± 7.36) to (70.3 ± 2.2), the maximal flow rates between 25-75% of the vital capacity with mean from (1.65 ± 0.4) to (3.03 ± 0.6), Maximum voluntary ventilation (in Liter) with mean from (71.15 ± 23.2) to (96.58 ± 7.01), P-value was $(p < 0.0001)$ while inspiratory capacity has not increase a lot than control group (in Liter) from (1.4 ± 0.33) in pre treatment to (2.06 ± 0.53) and to (1.85 ± 0.45) in control group. Conclusion: On the basis of the present data, it could be concluded that ischemic pressure release of trigger points in pectoral muscles in cardiac patients post open heart surgery is effective method for pain treatment and pulmonary function improvement in post operative cardiopulmonary rehabilitation program.</p>
Key words	1.	Compressive ischemic pressure release.
	2.	Pectoral's trigger.
Arabic Title Page	:	تأثير ضغط نقص الدم المتصاعد الانبساطي علي نقاط الالم في العضله الصدرية بعد جراحه القلب المفتوح.
Library register number	:	3543-3544.

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

Author	:	Sara Mohamed Mahrous.
Title	:	Criterion Validity of Vernier Caliper in Measuring Temporomandibular Joint Active Range of Motion.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abd Alatif.
	2.	Enas Al Sayed Abu Taleb
	3.	Hatem Al Azizi,
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Temporomandibular disorders are very common disorders (TMD) where 20-25% of the population exhibit one or more symptoms of TMD, that's why it's very important to find more valid and reliable devices to achieve a good noninvasive assessment procedure which will lead to better treatment strategies and better outcomes. Purpose: to investigate the validity and reliability of Vernier caliper in measuring TMJ maximum mouth opening, lateral deviation and protrusion. Subjects: 30 (14 male and 16 female) healthy subjects participated in the study, their age ranged from 20 to 30 years with mean age (25.26±2.77), Methods: x-ray radiograph for each subject while maximally open the mouth, laterally deviate it and protrude it were taken separately then all measurements were taken with Vernier caliper by 3physiotherapists and compared to measurements taken from the x-ray cephalometric analysis. Results: Result showed that Vernier caliper had a high validity in measuring MMO (r= +0.95), lateral deviation (r= +0.97) and protrusion (r= 0.96) all with associated (p= 0.0001), Also Vernier caliper showed a high inter-rater reliability in measuring MMO (ICC= 0.98), lat. deviation (ICC= 0.95) and protrusion (ICC= 0.97). At last it showed high intra-rater reliability in MMO (ICC= 0.99), lat. deviation (ICC=0.99) and protrusion (ICC= 0.99) all with associated (p= 0.0001). Conclusion: Vernier caliper had a high validity, inter rater and intra rater reliability for measuring TMJ ROM.</p>
Key words	1.	Temporomandibular joint.
	2.	Vernier caliper.
	3.	Validity.
	4.	range of motion.
	5.	Reliability.
Arabic Title Page	:	الصلاحية المعيارية لفرجار رنييه في قياس المدى الحركي لمفصل الفك الصدغي.
Library register number	:	3431-3432.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
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Author	:	Yasser Abd-EL-Hamid Mohamed Shams El-Din.
Title	:	Effect Of Kinesiotaping on Quadriceps Muscle Strengthening In Healthy Subjects
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima Mohamed Ali Kattabei
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Knee joint injuries are the most common disabling injuries in athletics, to prevent and minimize the detrimental effects of injuries, Kinesiotaping can be used especially in rehabilitation . Purpose: The purpose of the study was to investigate the effect of Kinesiotaping on the quadriceps muscle strength in healthy subjects. Materials and methods: Thirty randomly volunteer Healthy subjects, age range from 20 to 30 years old were participated in this study. They were randomly selected by sealed envelopes and divided into two equal groups each contain 15 subjects, containing 3 females and 12 males. The first experimental group (A) received Kinesiotaping and strengthening exercise by the use of Quadriceps Femoris Training Chair. The second control group (B) received strengthening exercise by the use of Quadriceps Femoris training chair. Results: There was no statistical significant difference in the paired t-test between pre and post treatment Peak torque of the quadriceps muscle of both treatment groups, P-value was ($p < 0.05$). For study Group (A) The mean pre treatment Peak torque of right quadriceps muscle at 60 degree was (163.6 ± 19.46). The mean post treatment Peak torque was (193.11 ± 26.89). The improvement percentage was 18.03%. For study Group (B), The mean pre treatment Peak torque was (162.46 ± 22.45). The mean post treatment Peak torque of right quadriceps muscle at 60 degree was (189.5 ± 29.46). The improvement percentage was 16.63%.</p> <p>Conclusion: There was no significant effect of Kinesiotaping on Quadriceps muscle strengthening at maximum concentric isokinetic testing mode in healthy subjects.</p>		
Key words	1.	Kinesiotaping
	2.	Quadriceps muscle strengthening
	3.	Peak torque
	4.	concentric isokinetic testing
	5.	Muscle Strengthening.
	6.	Healthy Subjects.
Arabic Title Page	:	تأثير لاصق الكينزيو على تقوية العضلة الرباعية في الأشخاص الاصحاء من الباحث.
Library register number	:	3587-3588.

**ELECTRONIC GUIDE TO THESES APPROVED BY DEPARTMENT OF BASIC SCIENCE
PREPARED BY ADEL ABD EL SALAM
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Author	:	Yomna Farag.
Title	:	Work related musculoskeletal disorder among physiotherapist.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen El Sayyad.
	2.	Neveen Abd El Latif.
	3.	Mohamed Taher.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: physiotherapists are known to be prone to work related musculoskeletal disorder but its prevalence among physiotherapists in Egypt has not been reported. Purpose: 1) To determine the prevalence of upper limb, lower limb and back musculoskeletal disorders among physiotherapists in Cairo, Egypt in the previous 12 month. 2) To determine relationship between physiotherapists characteristics, physical risk factors and musculoskeletal disorders among physiotherapists in Cairo, Egypt in the previous 12 month. Procedure: convenience sample of 400 physiotherapists were selected from all educational and public hospital and private clinic in Cairo, Egypt, These chosen physiotherapists were asked to answer modified Nordic questionnaire which assisted musculoskeletal disorder due to their work in last 12 month. Results: reported 12 month prevalence of work related musculoskeletal disorders among Egyptian physiotherapists were 90.7%. Prevalence was significantly higher in females than males in back injury and higher in males than females in lower limb injury. The back (61.75%) was the most commonly affected part. More injury occur from 21-30 years after graduation with high prevalence in back (70.7%), the highest prevalence was found among physiotherapists older than 40. Treating large number of patients were significantly related to upper limb, lower limb and back injury. Not all risk factors had an effect on upper limb, lower limb and back injury. No more than 29.6% took sick leave because of their injury. Conclusion: the prevalence of work related musculoskeletal disorders among physiotherapists in Egypt is high as the most values reported for their counterparts around the world.</p>
Key words	1.	Work related musculoskeletal disorder.
	2.	Modified Nordic questionnaire.
Arabic Title Page	:	اضطرابات الجهاز العضلي الحركي الناتجة عن العمل بين اخصائى العلاج الطبيعى
Library register number	:	3155-3156.