

Department of Basic Science

Master Degree
2007

Author	:	Abeer Ramadan Ibrahim.
Title	:	Influence of hip rotation angles on myoelectric activity of vastus medialis oblique during straight leg raising.
Dept.	:	Department of Basic Science.
Supervisors	1.	Samy Abd El Samad.
	2.	Amal Fawzy Ahmed.
	3.	Hala Rashad El Habshy.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Purpose: This study investigated the effect of different hip rotation angles on myoelectric activity of vastus medialis oblique during straight leg raising exercise. Study Design: (3×1) post experimental study. Materials and methods: Thirty healthy female without any history of knee or quadriceps injuries. Their mean age, weight, and height were (20.7± 1.8), (66.1± 9.5), and (161.6± 4.6) respectively. Each subject was asked to perform straight leg raising exercise with different hip rotation angles (neutral position, 30 degrees medial rotation, and 45 degrees lateral rotation) with dominant lower limb. The surface- integrated electromyographic signals of vastus medialis oblique over 10 seconds were collected and mean amplitude was determined. The EMG data of each subject performing straight leg raising exercise with the lateral rotation (45 degrees) and medial rotation (30 degrees) of hip joint were normalized as a ratio to the same subject EMG data of neutral position of hip joint. Results: This study revealed that there was significant difference in EMG amplitude of vastus medialis oblique among different hip rotation angles (P< 0.0001). There was significant difference between normalized EMG activity ratio of vastus medialis oblique muscle at lateral and medial rotation angle of hip joint (P< 0.0001). Conclusion: This study concluded that performing a straight leg raising exercise with lateral hip rotation was the most effective of the three positions as a specific strengthening exercise for vastus medialis oblique muscle. This finding may be important not only for the treatment of patients with patellofemoral pain but also in its prevention.</p>		
Key words	1.	Electromyography.
	2.	vastus medialis oblique.
	3.	therapeutic exercise.
	4.	hip rotation.
	5.	patellofemoral pain syndrome.
Arabic Title Page	:	تأثير زوايا دوران مفصل الفخذ على النشاط الكهربائي للألياف المائلة من الفص الداخلي للعضلة الرباعية أثناء رفع الطرف السفلي.
Library register number	:	1513-1514.

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

Author	:	Doaa Ibrahim Amin Ali.
Title	:	Biomechanical Analysis of Sit to Stand Movement.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen M EL-Sayyed.
	2.	Abeer Abd EL-Rahman Mohamed.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background: Sit to stand task is Very important in Therapeutic Setting and Rehabilitation Medicine as improve the Patient's mobility. The Purpose: of This Study was to investigate the biomechanical analysis of Sit to Stand Movement from Two different positions normal, forward sit to Stand. Subjects: Thirty normal subjects were divided in Two group (group A15 males) age (26.66± 5.05) (group B15 females) age (25.33 ± 4.06).All was evaluated by Three dimensional motion analysis to Measure hip, Knee, ankle angles synchronized with force platform to measure the vertical ground reaction Force in the Two different position. Results: There was statistical significance difference in hips; ankle joints angles motion. There was statistical significance difference in vertical ground reaction force between two different positions. Discussion and Conclusions: The forward Sit to stand position is better than normal sit to stand position and facilitate the Task.</p>		
Key words	1.	Biomechanics Sit to Stand.
	2.	Three Dimensional Motion force platform.
Arabic Title Page	:	التحليل الميكانيكي للحركة من الجلوس للوقوف.
Library register number	:	1629-1630.

**PHYSICAL THERAPY
LIBRARY
THESES 2007**

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

Author	:	Doaa Rafat ElAazab Mohamad.
Title	:	Influence of muscle fatigue on shoulder proprioception.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima Mohamed Ali Kattabei.
	2.	Maher Ahmed El-Keblawy.
	3.	Abeer Abd-Elrahman Mohamad.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background: Proprioception plays an important role in shoulder joint function and stabilization, while muscle fatigue may alter proprioceptive ability. Purposes: To investigate the influence of muscle fatigue and sex difference on shoulder proprioception. Study Design: A pre test post test design. Materials and Methods: Thirty normal subjects from both sexes were involved, age ranged between 18-25 years. The subjects were divided randomly into two equal groups, fifteen subjects in each group, group A included male subjects while group B included female subjects. Subjects in both groups received fatigue exercises on Biodex isokinetic dynamometer until peak torque of external rotator muscles dropped to 50% of the initial torque. The proprioceptive accuracy was measured pre fatigue and immediately post fatigue exercise. Results: It was found that the proprioceptive accuracy of shoulder joint was decreased significantly after fatigue exercise in both groups where (p=0.01) and (p=0.008) for group A and B respectively. There was no significant difference in the shoulder joint proprioceptive accuracy between both groups pre and post fatigue exercise where (p= -0.49) and (p=0.62) consequently. Conclusion: shoulder joint proprioception is diminished in the presence of shoulder muscle fatigue, suggesting clinical rehabilitation protocols should emphasize increasing muscular endurance.</p>		
Key words	1.	Shoulder joint.
	2.	Proprioception.
	3.	Muscle fatigue.
Arabic Title Page	:	تأثير الإجهاد العضلي على المستقبلات الحسية العميقة لمفصل الكتف.
Library register number	:	1543-1544.

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

Author	:	Fahd Abdel-Azim Hassan.
Title	:	Diclofenac phonophoresis efficacy in knee osteoarthritis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Fatma Seddik Amin.
	2.	Mohamed El-Gendy.
	3.	Ahmed Samy.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background: Osteoarthritis of the knee is reported to be a major health problem worldwide. Purposes: To investigate the diclofenac phonophoresis efficacy in knee osteoarthritis. Study Design: A pre test post test control group design. Materials and methods: forty patients with knee osteoarthritis from both sexes were involved, aged between 40– 60 years. They were divided into four equal groups, ten patients each. Patients in the first group received a diclofenac phonophoresis in addition to traditional exercise program in the form of stretching and strengthening exercises. Patients in the second group received a therapeutic ultrasound in addition to stretching and strengthening exercises. Patients in the third group received a diclofenac which is topically applied in addition to stretching and strengthening exercises. Patients in the fourth group (control group) received a traditional exercise program. Training was done 3 times a week for 4 weeks. Range of motion, Pain level and functional performance were measured before and after treatment. Results: there were significant differences within the four group before and after treatment and between the four groups after treatment in range of motion, Pain and functional performance .Conclusion: diclofenac phonophoresis proved to be beneficial in improving range of motion, functional performance and perceived knee pain in patients with knee osteoarthritis.</p>		
Key words	1.	osteoarthritis.
	2.	diclofenac phonophoresis.
	3.	electrogoniometer.
Arabic Title Page	:	كفاءة مادة الديكلوفيناك المدخلة بواسطة الموجات فوق الصوتية في حالات خشونة الركبة.
Library register number	:	1467-1468.

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

Author	:	Ghada Abd Elmoniem Abd Allah.
Title	:	Proprioceptive training influence on knee-ankle relationship during gait.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohammed Labib.
	2.	Amal Fawzy Ahmed.
	3.	Ragia Mohammed Kamel.
Degree	:	Master.
Year	:	2007.
Abstract	:	<p>Background: Knee osteoarthritis is associated with proprioceptive deficit which is an integral component of motor control, it is theorized that the loss of joint sensation (proprioception) may cause small gait alteration, repetitive micro trauma and ultimately excessive joint loading, proprioceptive training of subjects improves their postural control and may benefit human movement The Purpose of this study was to investigate the effects of proprioceptive training on knee- ankle relationship during gait Subjects 30 patients with bilateral knee osteoarthritis (their ages ranged from 45-65 years) were assigned randomly into two groups, group (A) the control group, included subjects with mean age of (55.86 ± 7.4 years), weight (165.26 ± 6.5 kg.) and height (162.53 ± 7.06 cm.). (B) The study group included subjects with mean age of (55.2 ± 6.6 years), weight (89.73 ± 8.8 kg.) and height (162.53 ± 6.07 cm.) Methods: (a) proprioception level of accuracy of the knee were assisted bilaterally using the isokinetic dynamometer system in both group (b) assessment of knee and ankle kinematics during gait were done using 3D motion analysis system to measure the angles of knee flexion and ankle planter flexion at heel strike and loading response, and to measure the angular velocity of the knee and ankle joints. Measurements taken for subjects in both groups before and after twenty four sessions after treatment. Both groups (A) and (B) received exercises and traditional treatment of osteoarthritis in addition to proprioceptive training for group (B). The Results indicated that there were a significant difference between both groups in the angles of knee flexion and ankle planter flexion. At heel strike, ($p=0.03$) and ($p=0.01$) for the right lower limb, and for the left lower limb ($p=0.04$) and ($p=0.03$), while at loading response, ($p=0.04$) and ($p=0.04$) for the right lower limb, and for the left lower limb ($p=0.02$) and ($p=0.03$). Also there were a significant difference between both groups in the angular velocity of the knee and ankle joints, at the right lower limb ($p= 0.05$) and ($p=0.001$), and at the left lower limb ($p= 0.03$) and ($p=0.02$). There were a significant difference in the level of proprioception accuracy, it was ($p=0.04$) for right knee and ($p=0.01$) for left knee. There were strong correlation between ankle and knee joint at the study group it was ($p=0.01$), ($r = 0.96$) for heel strike, ($p=0.01$), ($r=0.96$) for loading response, and ($p=0.01$), ($r=0.88$) for angular velocity. Conclusion proprioceptive training has a significant effect on the kinematics of the lower limb especially knee – ankle relationship in patients with knee osteoarthritis during gait.</p>
Key words	1.	Training.
	2.	ankle planter flexion.
	3.	knee flexion.
	4.	angular velocity.
	5.	gait.
	6.	knee osteoarthritis.
Arabic Title Page	:	تأثير تدريب المؤثرات الحسيه العميقه على العلاقه بين مفصل الركبه ومفصل الكاحل خلال المشي.
Library register number	:	1511-1512.

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

Author	:	Ghada Ismail Mohamed Kamel.
Title	:	Influence of smoking on isometric strength of back extensors.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohamed Labib.
	2.	Maher Ahmed El Keblawy.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background: smoking is a bad habit and well known risk factor for many diseases, also the back extensors play an essential role in trunk stability, postural alignment, and movement coordination, controlling active range of lumbar spine. The Purpose: of This Study was to investigate, the effect of smoking and effect of numbers of cigarettes that smoked per day on isometric strength of back extensors, also to detect the relation between angles of trunk flexion and isometric strength of back extensors. Materials and methods: 40 normal males (30 smokers and 10 non smokers) were assigned into four groups, 10 non-smokers (control group) with mean age 31.4 ± 4.8 years, 10 light smokers with mean age 27.5 ± 8.1 years, 10 moderate smokers with mean age 28.7 ± 6.6 years and 10 heavy smokers with mean age 30.5 ± 5.9 years. Isokinetic dynamometer was used to measure isometric strength of back extensors at three angles of trunk flexion from neutral sitting position (starting position), specially 15°, 30° and 45° to take the whole range. Results: there was statistical significant decrease in isometric strength of back extensors in smokers and there was statistical significant increase in isometric strength of back extensors with increasing the angles of trunk flexion. Conclusions: cigarette smoking had an effect on decreasing the strength of back extensors, and with increasing angle of flexion there was increasing in the isometric strength of back extensors.</p>		
Key words	1.	Smoking.
	2.	Back Extensors.
	3.	Isometric Strength.
Arabic Title Page	:	تأثير التدخين على قوة الإنقباض الساكن لعضلات فرد الظهر.
Library register number	:	1635-1636.

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

Author	:	Hanaa Kenawy Ata.
Title	:	Variation in Shoulder Rotators Rorque Production in the Scapular and Frontal Planes.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohamed Labib.
	2.	Ragia Mohamed Kamel.
Degree	:	Master.
Year	:	2007.
Abstract	:	<p>Background: Isokinetic dynamometry has been employed for assessing the performance of volunarily contracting muscle. Isokinetic testing may produce a variety of different muscle performance data. For example, torque, peak torque, work and power. Peak torque is the most representative and widely used parameter to evaluate muscle function. The purpose: To compare torque production in the scapular and frontal planes during isokinetic testing of shoulder rotators and to determine the most efficient position for strength training and therefore rehabilitation of shoulder rotators. Design and subjects: Single repeated measurement design was used. Thirty healthy female of physical therapy students and employees participated in this study, their age ranged between 18-32 years. Methods: All testing was performed by a single investigator and all subjects were tested both in the scapular and frontal planes for each rotational movement. Subjects were randomly assigned to either plane for initial testing. Each subject performed 3 trials of concentric isokinetic shoulder internal and external rotation in the frontal and scapular planes. The mean peak torque of the three trials was measured. Paired t-test was used to distinguish between shoulder rotators torque production in the scapular and frontal planes. Results: The results revealed that there was significant difference in shoulder internal rotators torque in the scapular and frontal planes. The torque generated by the shoulder internal rotators was significantly greater in the scapular than in the frontal plane ($p < 0.014$) and there was also significant difference in shoulder external rotators in the scapular and frontal planes. The torque generated by shoulder external rotators was significantly greater in the scapular plane than in the frontal plane ($p < 0.0001$). Discussion and conclusion: The findings revealed that torque generated by shoulder internal and external rotator muscles during concentric isokinetic contraction varies according to shoulder joint testing position and isokinetic shoulder strengthening and testing should be performed in the scapular plane.</p>
Key words	1.	Isokinetic.
	2.	Shoulder rotators.
	3.	Torque.
Arabic Title Page	:	مدى الاختلاف في العزم الناشئ من عضلات دوران الكتف في مستوى لوح الكتف والمستوى السهمى الجانبي.
Library register number	:	1651-1652.

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

Author	:	Magda Gaid Sedhom Guirguis.
Title	:	Comparison between Delorme and Oxford Resistance Training Techniques.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omaima Kattabei.
	2.	Ragia Kamel.
Degree	:	Master.
Year	:	2007.
Abstract	:	<p>Purpose to compare the difference between Delorme and Oxford as progressive resistance training techniques in improving muscles strength, also to examine if the gender has an effect on the results of both techniques. Subjects and method Eighty healthy subjects from both sexes were participated in this study, with mean age (21.325 ± 1.854) years, with mean weight (67.625 ± 7.548) kg. and with mean height (167.10 ± 7.29) cm. The subjects were divided into two equal groups, each group subdivided into males and females subgroups. Subjects in the first group (40 subjects) had received Delorme technique, and subjects in the second group (40 subjects) had received Oxford resistance technique on their dominant quadriceps femoris muscle. Biodex system 3 Pro isokinetic dynamometer was used to measure the peak torque to body weight ratio (PK/BW) of the dominant quadriceps femoris muscle for three trials and the mean was calculated. Also, the difference between males and females in both groups was measured. Results The study revealed that there was statistical significant difference in percentage of improvement of the quadriceps muscle PK/BW between the two groups in favor to Delorme technique, also there was statistical significant difference between males and females in group I and between females in group I and II in favor to females. But no statistical significance difference between males and females in group II and no statistical difference between males in group I and II. Discussion and conclusion: The finding revealed that both Delorme and Oxford techniques improve strength but Delorme get better result, and females show better improvement with Delorme technique.</p>
Key words	1.	Strength.
	2.	Resistance Training.
	3.	Delorme.
	4.	Oxford.
Arabic Title Page	:	مقارنه بين طريقتى دلورم واكسفورد فى التدريب بالمقاومة.
Library register number	:	1533-1534.

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

Author	:	Mary Nassif.
Title	:	Influence of progressive pressure release on low back dysfunction.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen Mohamed El Sayyad.
	2.	Neveen Abdel Lateef Abdel Raouf.
	3.	Hassan Mahmoud Baraka.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background & Purpose: Low back dysfunction is a universal problem striving for a solution. Myofascial dysfunction can be the main source of dysfunction and is characterized by myofascial trigger points. However there are not many controlled studies that have analyzed the effect of manual therapies in their treatment. The purpose of this study was to establish whether progressive pressure release had specific efficacy in management of myofascial trigger points in patients with low back dysfunction. Subjects: Thirty patients with low back dysfunction, aged 20 to 40 years (30.86,±5.35), with one or more trigger points in four selected lumbogluteal muscles (quadratus lumborum, priformis, gluteus medius and minimus) participated in the study. Method: Subjects were randomly divided into 2 groups; group (A) was the control group that received myofascial release and spray and stretch, 3 days/week for 4 weeks. Group (B), the treatment group received the same treatment in addition to progressive pressure release, 3 days/week for 4 weeks. Lumbar range of motion was measured by a back range of motion device and trigger point tenderness was measured by an electronic algometer through pressure pain threshold value. Measurements were obtained in the first treatment session, pre-treatment and at the last session, post-treatment. Results: Data obtained was analyzed via paired and independent t-test. There were statistical differences between the 2 groups, where the treatment group showed greater improvement in lumbar range of motion and pain threshold with a p value (P<0.05). Discussion & Conclusion: Progressive pressure release was shown to be effective in reducing trigger point tenderness and in increasing lumbar range of motion, in individuals with low back dysfunction.</p>		
Key words	1.	Low back dysfunction.
	2.	Myofascial trigger points.
	3.	Progressive pressure release.
	4.	Digital algometer.
	5.	BROM device.
	6.	Pressure pain threshold.
Arabic Title Page	:	تأثير الضغط المتصاعد على مشاكل أسفل الظهر.
Library register number	:	1567-1568.

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

Author	:	Mohamed Moustafa Mohamed Ahmed.
Title	:	Influence of Therapeutic Exercise on Circulating Thyroid Hormones as a Factor in Reduction of Body Weight.
Dept.	:	Department of Basic Science.
Supervisors	1.	Fatma sedik Amin.
	2.	Mohamed Hussein El Gendy.
	3.	Laila Ahmed Rashed.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Purpose To investigate the effect of exercise on Thyroxin(T3),Triiodothyronine T4) and Thyroid Stimulating Hormone(TSH) and reflection of that on Body Mass Index (BMI). This study also conducted to clarify the effect of low caloric diet program on the level of the same hormones and reflection on BMI. Subjects and methods: Two groups of normal male subjects, each group consists of (25 males) aged from 20 to 40 years old with 30-35 BMI participated in this study.. (Group I) had low caloric diet program only for one month. (Group II) had the same low caloric diet program in addition to a program of therapeutic exercise on treadmill with moderate intensity every other day for one month. Evaluation of T3, T4, TSH and BMI were studied before diet in group I and before exercise and diet in group II. Results: This study showed significant increase in T3, T4 after the diet program (group I) accompanied by significant decrease in TSH, and significant decrease in BMI. After the exercise and diet (group II) a more significant increase in T3,T4,with significant decrease in TSH and a significant decrease in BMI. Conclusion: Low caloric diet is effective in increasing the level of circulating thyroid hormones and that is reflected on the body weight by decreasing the body mass index. But both low caloric diet and moderate intensity therapeutic exercise were more effective in increasing the level of circulating thyroid hormones which is reflected on weight reduction.</p>		
Key words	1.	Therapeutic exercises.
	2.	Circulating thyroid hormones.
	3.	weight reduction.
Arabic Title Page	:	أثر التمرينات العلاجية على مستوى هرمونات الغدة الدرقية بالدم كعامل يؤدي الى انخفاض الوزن.
Library register number	:	1657-1658.

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

Author	:	Mohamed Samy Mohamed.
Title	:	Validity of three-dimensional motion analysis system in measurement of the lumbar range of motion.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen M. El-Sayyad.
	2.	Sahar M. Adel.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The Purpose of the study was to investigate the validity of the 3-D motion analysis system for measuring the lumbar range of motion. Thirty normal male subjects were involved; each one of them was examined by one examiner using both 3-D motion analysis system and BROM device to measure lumbar range of motion. The results were non statistical difference between BROM device and 3-D motion analysis system for measuring lumbar range of motion. The 3-D motion analysis system is valid instrument for measuring the lumbar range of motion accurately.</p>		
Key words	1.	Validity.
	2.	3-D motion analysis.
	3.	Lumbar range of motion.
	4.	BROM.
Arabic Title Page	:	مدى مصداقية جهاز تحليل الحركة (ثلاثى الأبعاد) فى قياس حركة أسفل الظهر.
Library register number	:	1597-1598.

**PHYSICAL THERAPY
LIBRARY
THESES 2007**

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

Author	:	Mohamed Serag El-Dein Mahgoub Mohamed.
Title	:	The Effect of Different TENS modes on Treatment of Chronic Low Back Dysfunction.
Dept.	:	Department of Basic Science.
Supervisors	1.	Omima Kattabei.
	2.	Maher Keblawy.
	3.	Houssin Moharm.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background: The effectiveness of different TENS modes for treatment of low back dysfunction (LBD) still unproved and controversy exists in the literature about the specific TENS mode which result in improved outcomes. The purpose: of this study was to investigate the effect of different TENS modes (Conventional, Acupuncture, Burst) on treatment of patients with LBD. Subjects: 30 patients (17 males and 13 females) suffering from chronic LBD were anticipated in this study. The mean of their age was (39.4 ±5.5) mean weight (83.3 ±12.2) and mean height (171.8 ±9.2). Patients were assigned randomly into three groups, each group included 10 patients. Method: all groups received ultrasonic as traditional treatment, group (A) received conventional TENS, group (B) received Acupuncture like TENS and group (C) received Burst TENS for four weeks of treatment. Lumbar rang of motion (ROM) in flexion and extension measured by OB Goniometer, pain measured by visual analogue scale (VAS) and functional disabilities measured by Oswestry disability index (ODI) the measurement was done before and after the treatment period of four weeks. The significant level was ≤ 0.05. Results: revealed that there was significant reduction in pain, functional disabilities and increase in lumbar flexion and extension after treatment in the three groups. Group (C) showed significant improvement in all measured variables than group (A and B). Discussion and Conclusion: For patients with chronic LBD, Burst TENS result in greater reduction in pain intensity, increase lumbar ROM and improve functional activities more than the other two groups (conventional and Acupuncture).</p>		
Key words	1.	Low Back Dysfunction.
	2.	conventional TENS.
	3.	Acupuncture.
	4.	TENS.
	5.	Burst TENS.
Arabic Title Page	:	مدى تأثير الأنماط المختلفة للتيار المنبأ للعصب عبرالجلد فى علاج حالات خلل اسفل الظهر.
Library register number	:	1465-1466.

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

Author	:	Nesreen Ahmed A bd El-Galil.
Title	:	Isometric Muscle Force Responses to Different Waveforms of Neuromuscular Electrical Stimulation.
Dept.	:	Department of Basic Science.
Supervisors	1.	Fatma Sedeek.
	2.	Ragia Mohamed Kamel.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background : Electrical stimulation is an effective way to regain muscle strength in a weakened muscle, an injured or unused muscle that can be difficult to contract due to pain or weakness. Objectives: The objectives of this study were to investigate the responses of isometric muscle force to different waveform shapes of neuromuscular electrical stimulation. Method: 40 normal volunteers of both sexes participated in the study. Their mean age was 21. ± 3,7 Years mean weight 75.6 ±8.4 Kg and mean height 174.3 ±6.2Cm with four different wave form shape used (triangular , square , fixed monophasic (MF) and fixed diphasic (DF)), one wave form for each group. Isometric muscle force of quadriceps femoris muscle was tested by Cable Tensiometer before electrical stimulation, after six sessions, and at the end of 12 sessions to evaluate the acquired maximal isometric muscle force. Results: There was a significant increase in the isometric muscle force of quadriceps in all groups, The highest increase in QF isometric force was found in group I(Triangular) where the mean difference was 120.4 (N) then group III (DF) where the mean difference was 115.2 (N) then group II (Square) where the mean difference was 114.4 (N) and the least change was found in group IV(MF) where the mean difference was 107.9(N) Improvement of isometric muscle force in males was more than in females in all four groups. Conclusion: There are no significant differences between different waveforms of neuromuscular electrical stimulation. There is significant difference in improvement between males and females.</p>		
Key words	1.	NMES.
	2.	Waveforms.
	3.	Isometric Muscle.
Arabic Title Page	:	استجابة العضلة الاستاتيكية للأشكال المختلفة من التنبيه العضلي العصبي للتيار الكهربائي.
Library register number	:	1653-1654.

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

Author	:	Rania Nagy Karkoucha.
Title	:	Effect of neurodynamic tension on cervical radiculopathy.
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohammed Labib.
	2.	Sami Abd El Samad Nassif.
	3.	Hala Rashad El Habashy.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Back ground: Cervical spondylosis is a problem that is frequently encountered by physical therapists. This problem gives symptoms such as pain in the neck and upper extremity as well as neurological signs such as dermatomal parathesia. So treatment of this problem is of great concern. Purpose: This study was conducted to investigate the effect of neurodynamic tension on F wave latency in patients with cervical spondylosis. Subjects: 30 patients suffering from cervical spondylosis, their ages ranged from 30 to 50 years. Patients were divided into three groups, each group included 10 patients. All groups received conservative treatment in a form of Infrared and Ultrasound. In addition to Upper Limb Tension Test I for group II and Upper Limb Tension Test 2a for group III. Results: The results showed that there was statistical significant increase in F wave latency from 28.1500 m sec. to 28.6400 m sec. for group I (control group). While for group II, F wave latency decreased significantly from 29.4900 to 27.3700 m sec., and for group III which received, it decreased from 29.8600 to 25.340 m sec. Discussion: The improvement gained in group II and group III was due to that the dynamic mobilization of the median nerve might affect the vascular dynamics via improving blood supply to the hypoxic nerve tissues and normalizing the pressure gradient around the nerve. Thus, the axonal transport mechanism and the mechanical features of the nerve fibers and connective tissue improved. Conclusion: It was concluded that neurodynamic tension is a beneficial conservative way in treating cervical spondylosis. Other neurodynamic tension alternatives and combinations are suggested for future studies.</p>		
Key words	1.	Cervical Spondylosis.
	2.	Cervical Radiculopathy.
	3.	Neurodynamic Tension.
	4.	F wave latency.
Arabic Title Page	:	تأثير الشد العصبي على حالات اختلال الجذور العصبية في الفقرات العنقى.
Library register number	:	1639-1640.

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

Author	:	Reham Hussein Diab.
Title	:	Validity of motion analysis for measuring scoliosis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen M. El-Sayyad.
	2.	Neveen Abd El-Latif.
	3.	Mohamed Abd-El Fatah Hassan.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Background Adolescent Idiopathic scoliosis (AIS) is a public health problem that frequently restricts patient activity and affects his psychological condition especially in adolescent period. The purpose of this study to investigate the validity of 3-D motion analysis in assessing Adolescent Idiopathic scoliosis in comparison to Cobb angle. Subjects Thirty subjects with Adolescent Idiopathic scoliosis (20 females, 10 males), age (19.4 ± 1.08) years, weigh (59.06 ± 7.96) kilograms, length (164 ± 7.27) centimeters were evaluated by both 3-D motion analysis system and x-ray to measure spinal angles in scoliotic subjects. Results There was non statistical different between x-ray and 3-D motion analysis system for measuring angle of scoliosis where r-value equal (+ 0.89, + 0.86, + 0.96) for thoracic, thoracolumbar and lumbar scoliotic group respectively. Conclusion The correlation analysis between the x-ray and qualysis measurement revealed that there was a strong correlation between the two measurements. It's recommended to include 3-D motion analysis system in physical examination evaluation for treating patients complaining from AIS.</p>		
Key words	1.	Validity.
	2.	Scoliosis.
	3.	3-D motion analysis.
	4.	X-ray.
Arabic Title Page	:	مدى مصداقية التحليل الحركي في قياس زاوية الانحناء الجانبي للظهر.
Library register number	:	1507-1508.