Department of Basic Science

Master Degree

2015

Author	**:**	**Abdullah Osama Abdullah Atta**
Title	**:**	**Influence of total knee replacement on screw home mechanism**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima M. Kattabei**
	2.	**Mahmoud A. Hafez**
	3.	**Ibrahim Moustafa**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Total knee replacement (TKR) has evolved to a successful operation with acceptable longevity. Post-operative rehabilitation is very important to compensate functional deficits post-operatively. Aim of the study: to measure the mechanical changes of screw home mechanism (knee locking mechanism) of the knee joint after TKR, in addition to assess if there is a correlation between screw home mechanism and patient lower limb function. Study design and Methodology: Pre-test post-test study design with control group. The material included thirty consecutive patients with knee osteoarthritis who were candidate for unilateral total knee replacement as experimental group; another thirty normal subjects were included in this study as a control group. Both groups were matching in age, weight, height and body mass index. Helft's test , Knee Society Scoring System (KSS) and the Lower Extremity Functional Scale (LEFS) were studied preoperatively and six months postoperatively in experimental group, at the beginning of the study and after six months in control group. Results: There were significant differences between experimental group and control group in each tests Helfet's, LEFS and KSS. Also, there were significant differences between experimental group pre-operatively and six months post operatively. Relationship between Helfet's test and LEFS revealed that there was a significant strong positively relationship. While relationship between Helfet's test and KSS revealed that there was a significant intermediate positively relationship. We concluded that TKR may cause mechanical changes of screw home mechanism (locking mechanism) of the knee joint and absence of screw home mechanism may have a direct effect in LEFS and KSS.

Key words	**1.**	**Total knee replacement**
	2.	**screw home mechanism**
	3.	**knee locking mechanism**
Classification number	**:**	**000.000.**
Pagination	**:**	**88 p.**
Arabic Title Page	**:**	**تأثير تغيير مفصل الركبة على ميكانيكية قفل مفصل الركبة.**
Library register number	**:**	**4097-4098.**

Author	**:**	**Ahmed Abdallah Hassanien**
Title	**:**	**Efficacy of Laser and Iontophoresis in Management of Shoulder Impingement Syndrome**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohammed Hussein Elgendy**
	2.	**Ashraf Nehad Moharram**
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Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Shoulder impingement syndrome and rotator cuff disease are among the most common causes of shoulder pain and dysfunction in adults. This can result in pain, weakness and loss of movement at the shoulder. Purpose: this study was conducted to investigate and compare the effects of laser, iontophoresis and their combination on pain level, functional disability and shoulder range of motion in patients with shoulder impingement syndrome. Subjects: 45 patients with shoulder impingement syndrome (15 females and 30 males) aged from (25-45 years) and they were assigned randomly into three equal groups. Group (A) consisted of fifteen patient with mean age (35.86 ± 5.66) years, mean height (169.66 ± 3.95) cm and mean weight(79.93 ± 3.73)kg. Group (B) consisted of fifteen patient with mean age (36.93 ± 6.01) years, mean height (168.4 ± 5.79)cm and mean weight (81 ± 5.66)kg also Group (C) consisted of fifteen patient with mean age (36.33 ± 6.84)years, mean height(170.2 ± 4.41)cm and mean weight(80 ± 7.14)kg. Methods: Group (A) recived low level laser therapy and stretching and strengthening exercise, Group (B) received iontophoresis and stretching and strengthening exercise and Group (C) received combined low level laser and iontophoresis in addition to stretching and strengthening exercise. Shoulder range of motion was assessed using the electrogoniometer device, Functional disability was assessed using the DASH questionnaire and pain intensity level was assessed using the visual analogue scale for each patient before and after treatment. Results: Indicated that, there was a significant difference within each Groups (A, B and C) pre and post treatment for shoulder range of motion, functional disability and the pain intensity. But there was non-significant difference among the three group pre and post treatment. Conclusion: there is no significant difference among low level laser, iontophoresis and their combination in treatment of shoulder impingement syndrome.

Key words	**1.**	**Shoulder impingement syndrome**
	2.	**low level laser.**
	3.	**Pain.**
	4.	**range of motion.**
	5.	**functional disability.**
Classification number	**:**	**000.000.**
Pagination	**:**	**123 p.**
Arabic Title Page	**:**	**تأثير الوخز بالابر الصينية مقابل التنبيه السطحى لنقاط الوخز الابرى على ضغط الدم لحالات ضغط الدم المرتفع.**
Library register number	**:**	**4093-4094.**

Author	**:**	**Ahmed Aboul Fotouh El Sayed Abd Allah**
Title	**:**	**Effect of mobilization in prone traction on cervical disc bulge.**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Aliaa Attia Diab**
	2.	**Ibrahim Moustafa Moustafa**
	3.	**Hatem M. El Azizi**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Disc injury or degeneration could lead to mechanical compression or chemical irritation of the nerve root causing neurological deficits which often result in significant functional limitations and disability. Cervical traction and mobilization are generally regarded as a conservative management in treating various types of neck disorders. Purpose: This study was conducted to determine the effect of mobilization in prone traction on cervical disc bulge. Subjects: Thirty patients of both gender with cervical disc bulge at C5, C6 and/or C6, C7 levels participated in this study. Their ages ranged from 40 to 50 years old were divided into two groups, control and study, 15 patients in each group. Both groups received traditional physical therapy program for neck pain for 4 weeks at a frequency of 3 sessions per week, additionally the study group received mobilization in prone traction on the level of the bulged disc. Both groups were assessed pre and post treatment for the size of the disc bulge by magnetic resonance imaging (MRI), for pain by visual analogue scale (VAS) and for functional activities by neck disability index (NDI). Results: There was significant decrease in the mean value of the size of the bulged disc post treatment in the study group compared with control group (p = 0.002), there was significant decrease in the median values of VAS post treatment of study group compared with control group (p = 0.0001) and there was significant decrease in the median values of NDI post treatment of study group compared with control group (p = 0.0001). Conclusion: It was concluded that mobilization in prone traction has significant effect on the size of the bulged disc, cervical pain and neck function in patients with cervical disc bulge.

Key words	**1.**	**Cervical**
	2.	**Disc**
	3.	**Traction**
	4.	**Mobilization.**
	5.	**prone traction.**
	6.	**cervical disc bulge.**
Classification number	**:**	**000.000.**
Pagination	**:**	**100 p.**
Arabic Title Page	**:**	**تأثير التحريك مع الشد من وضع الاستلقاء على البطن على البروز الغضروفى العنقى.**
Library register number	**:**	**4145-4146.**

Author	**:**	**Ahmed Ali Mohammed Torad.**
Title	**:**	**Validity And Reliability Of The Arabic Version Of Koos-Physical Function Short Form In Knee Osteoarthritic Patients.**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Wadida Hassan Abd El Kader**
	2.	**Marwa Shafiek Mustafa Saleh**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Knee osteoarthritis (OA) is a chronic degenerative and progressive condition affecting physical function. So, it is necessary to measure physical function in OA. Purpose: The purpose of this study was to test face and content validity, feasibility and internal consistency and test retest reliability of Arabic-language version of knee injury and osteoarthritis outcome score physical function short form (KOOS-PS) to measure the physical function (PF) level in knee osteoarthritic patients. Subjects and methods: Three expert panels (each consists of ten experts) and 69 patients with knee OA participated in this study, 150 sheets (including retest sheets) were filled out in this study considering that bilateral knee osteoarthritic patient filled out 2 sheets. Forward translation, development of preliminary initially translated version, backward translation, development of the pre-final version and testing of pre-final version using experts then testing of the final version on patients was done. Clarity index, expert proportion of clearance, index of content validity, expert proportion of relevance, descriptive statistics, missed item index, time taken to answer the scale, Cronbach's coefficient alpha and Spearman's rank correlation coefficients were used for statistical analysis. Results : The study showed that scale index of clarity equals 100%, scale-level clarity index universal agreement (UA) equals 100% and the mean of proportion of clearance (clear responses) equals 100%. In addition, scale index of content validity (S-CVI) equals 97.14%, S-CVI/UA equals 71% and the mean of the proportion of relevance (relevant responses) equals 97.14%. The scale items were filled by 99.4% in all sheets and it needed three minutes or less to be answered in about 75% of all sheets, Cronbach's alpha equals 0.848 (0.789, 0.896) and all Spearman's rank correlation coefficients between test and retest results were statistically significant. Conclusion: Arabic-language version of the knee injury and osteoarthritis outcome score physical function short form has face and content validity, feasibility and internal consistency and test retest reliability enough to measure the physical function in knee osteoarthritic patients.

Key words	**1.**	**Validity**
	2.	**Reliability**
	3.	**Koos-Physical Function Short**
	4.	**Knee osteoarthritis**
Classification number	**:**	**000.000.**
Pagination	**:**	**118 p.**
Arabic Title Page	**:**	**أختبار صلاحية و مصداقية النسخة العربية من مقياس كووس المختصر للوظيفة البدنية على مرضى خشونة الركبة.**
Library register number	**:**	**4443-4444.**

Author	**:**	**Ahmed Mahmoud Hassan El-Mekkawey**
Title	**:**	**The effect of balance training on balance in hemiparetic patients**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Wadida Hassan Abd El Kader**
	2.	**Maha Atef Zaky**
	3.	**Rania Nagy Karkousha**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Hemiparesis is the most frequent neurological deficit after stroke.The purpose of this study was to investigate the effect of Biodex balance training on balance in hemiparetic patients. Methods: Forty ambulant hemiparetic patients from both genders (31 males and 9 females) participated in the study when the patients were clinically stable after 6 months of attack and classified randomly into two equal groups (Group (A) and Group (B)). Both groups received a conventional physical therapy treatment. In addition, Group (B) received balance program using the Biodex Balance System including dynamic balance training and dynamic limits of stability training. The treatment program was conducted three times per week for 12 weeks and the patients were assessed for the scores of Tinetti Balance Test and Biodex Balance System. These measures were recorded three times, before the application of the treatment program, at the middle of application (after 6 weeks) and after the end of treatment program (after 12 weeks). Results: The results of this study showed that there was significant improvement in Tinetti Balance Test in Group (A) and Group (B) and the improvement was higher in the Group (B) than Group (A). For Group (B) there was higher significant improvement in dynamic balance and dynamic limits of stability .Conclusion: It was concluded that this balance program is more effective in improving balance than conventional physical therapy alone, in hemiparetic patients following stroke.

Key words	**1.**	**Balance**
	2.	**Hemiparesis**
	3.	**Stroke**
	4.	**Biodex.**
	5.	**Balance**
Classification number	**:**	**000.000.**
Pagination	**:**	**126 p.**
Arabic Title Page	**:**	**تأثير تدريبات التوازن علي الإتزان في مرضي الشلل النصفي.**
Library register number	**:**	**4383-4384.**

Author	**:**	**Ahmed Mahmoud Nasr Tolba**
Title	**:**	**Manual ischemic compression on quadriceps trigger points in anterior knee pain syndrome**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Fatma Seddek Amin**
	2.	**Adham Abdel Raouf Elsharkawy**
	3.	**Salah El-Din Bassit Ahmed**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Anterior knee pain syndrome is the most common knee complaint seen in adolescents and young adults. It is might be caused by trigger points in quadriceps muscle. Purpose: The aim of this study was to investigate the effect of manual ischemic compression on quadriceps trigger points on patients suffering from anterior knee pain syndrome. Subjects and Methods: This was a quantitative, clinical exploratory study, thirty suitable participants suffering from anterior knee pain syndrome aging between 25-40 year males and females were randomly allocated into two equal groups, and both groups were screened for quadriceps' trigger points. All participants were assessed before any intervention and after 15 sessions, subjective data was obtained using Kujala Patellofemoral Scoring System for pain and functional level assessment while objective data was obtained using the Pressure algometer to measure the level of Pressure Pain Threshold, group A consisted of 15 participants and considered the experimental group was treated by manual ischemic compression beside the conventional physical therapy program consisted of (hot packs, patellar mobilization, strengthening exercise and activity modification), while group B consisted of 15 participants and considered the control group which treated by the same conventional physical therapy program only. Results: showed that there was no statistical significant difference between outcome data obtained from both groups in Kujala patellofemoral scoring system (P-Value >0.05) and in algometric readings for pressure pain threshold (P-Value >0.05). Conclusion: There was no significant effect of manual ischemic compression on quadriceps trigger points in anterior knee pain syndrome.

Key words	**1.**	**Anterior knee pain syndrome**
	2.	**Manual ischemic compression**
	3.	**Kujala patellofamoral score**
	4.	**quadriceps trigger points.**
	5.	**knee pain syndrome.**
Classification number	**:**	**000.000.**
Pagination	**:**	**86 p.**
Arabic Title Page	**:**	**العلاج بالضغط اليدوي علي نقاط زناد العضلة الرباعية في متلازمة ألم الركبة الأمامى.**
Library register number	**:**	**4151-4152.**

Author	**:**	**Ahmed Sameer Abd El-Khalik**
Title	**:**	**Association between forward head posture and sympathetic sudomotor outflow in asymptomatic subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Aliaa Attiah M Diab**
	2.	**Salah Eldeen Baset Ahmed**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: The adverse effects of abnormal forward head posture, which considered as a common posture displacement with a conservative estimate of 66%, highlighted in many studies, however there is a lack of literature concerning its effect on sympathetic fibers. The purpose: This study was conducted to investigate the association between forward head posture and the latency and amplitude of sympathetic skin response (SSR). Subjects: Thirty subjects with mean age 25.9 ± 2.56 years, mean height 175.86 ± 6.34 cm, mean weight 84.06 ± 9.49 kg and mean body mass index 27.16 ± 2.54 kg/m2 were participated in this study with cranio vertebral angle (CVA) or forward head angle mean 34.2 ± 3.5O. Method: Forward head posture was determined by measuring craniovertebral angle and sympathetic sudomotor outflow was determined by measuring sympathetic skin response (SSR) by measuring latency and amplitude of sympathetic skin response. Results: There was significant correlation between cranio vertebral angle and latency of sympathetic skin response ($r = -0.6050$, $p < 0.0004$), and between cranio vertebral angle and amplitude of sympathetic skin response ($r = 0.4377$, $p = 0.0156$). Conclusion: It was concluded that there was significant correlation between cranio vertebral angle and latency of sympathetic skin response, between cranio vertebral angle and amplitude of sympathetic skin response and cranio vertebral angle is a predictor for change in latency and amplitude of sympathetic skin response.

Key words	**1.**	**Cervical spine**
	2.	**Sympathetic outflow**
	3.	**Sympathetic response**
	4.	**head posture.**
Classification number	**:**	**000.000.**
Pagination	**:**	**82 p.**
Arabic Title Page	**:**	**الأرتباط بين الوضع الأمامى للرأس و الجهاز العصبى السمبثاوى عند الأشخاص الأصحاء.**
Library register number	**:**	**4129-4130.**

Author	**:**	**Al Shimaa Shaaban Abdelazeim**
Title	**:**	**Lidocaine phonophoresis versus progressive pressure release upper trapezius myofascial trigger points**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima Mohamed Ali Kattabei**
	2.	**Ibrahim Moustafa Moustafa Abu Amer**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Purpose: The aim of this study was to compare the effects of lidocaine phonophoresis to progressive pressure release on upper trapezius myofascial trigger points. Method: Thirty six patients (20 females and 16 males) with active trigger points. Their age ranged from 20 to 30 years with a mean age (24.88±3.50). Patients were randomly divided into three equal groups A, B & C. Group A received lidocaine phonophoresis for 5 minutes duration for four sessions. Group B received progressive pressure release technique for 2 minutes for four sessions. Group C (control group) didn't receive any treatment. Pressure pain threshold (PPT), Neck disability index (NDI) and visual analogue scale (VAS) were used to evaluate patients at three intervals (pre treatment, post treatment and at two weeks follow up). Results: Within group analysis there was significant difference of PPT, NDI and VAS at three group while (p<.05). At post treatment, the between group analysis revealed a significance difference between group in the favor of group A for PPT (A 117%, B 83% and C 33%), NDI (A 79%, B 54% and C 29%) and VAS(A 88.3, B 79% and C 33%). At follow up, there was a significance difference between group in the favor of group A for PPT (A 149%, B113% and C 52%), NDI (A 86%, B 47% and C 47%) and VAS (A 90%, B 74% and C 55%). Conclusion: lidocaine phonophoresis is more effective than progressive pressure release in treatment of active trigger points at patients with myofascial pain syndrome.

Key words	**1.**	**Phonophoresis**
	2.	**Progressive Pressure Release**
	3.	**myofascial trigger points**
	4.	**Lidocaine.**
	5.	**upper trapezius.**
Classification number	**:**	**000.000.**
Pagination	**:**	**139 p.**
Arabic Title Page	**:**	**ماده الليدوكايين المدخلة بواسطه الموجات فوق الصوتيه مقابل الضغط المتصاعد على نقاط الألم العضلي الليفي فى الجزء العلوي من العضلة شبه المنحرفة.**
Library register number	**:**	**4263-4264.**

Author	**:**	**Alaa Mohamed Fattin**
Title	**:**	**Passive Joint Mobilization and Kinesio-Taping in Knee Osteoarthritic Patients**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Neveen Abdel Latif Abdel Raoof**
	2.	**Magda Gaid Sedhom**
	3.	**Amr Abdalla Azzam**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Osteoarthritis is ranked as sixth leading cause of moderate and severe disability. Knee osteoarthritis is considered a significant contributor of pain and functional impairment in people aged over 60 years that prevent them from participating in regular physical activity and impaired the quality of life. If left untreated, pain and stiffness will result in a loss of physical function and self –independence. Purpose: to determine long term effect of passive Knee mobilization and Kinesio taping on pain, range of motion, proprioception and functional level in osteoarthritic patients. Subjects and method: sixty grade II osteoarthritic patients (30 males, 30 females) from 40 to 60 years old and Body mass index less than 30 kg participated in this study. They were classified into four groups of equal number and were assessed using visual analogue scale to measure pain, Biodex system to measure proprioception in active mode in two angles 30° and 60°, Electrogoniometer to measure knee flexion and extension range of motion and Functional activity using Western Ontario Mcmaster Arthritis Index. Results: revealed that there was significant difference between pre and post treatment in the four groups regarding pain, range of motion, proprioception, and functional level. There was no significant difference between the four groups of passive joint mobilization and kinesio taping on pain, range of motion, proprioception, and functional level in osteoarthritic patients. Conclusion: both passive joint mobilization and kinesio taping in addition to conventional program of infra red and exercise are effective; showing improvements on pain, range of motion, proprioception and functional level in osteoarthritic patients.

Key words	**1.**	**Mobilization.**
	2.	**Isokinetic**
	3.	**Osteoarthritic**
	4.	**Passive Joint .**
	5.	**Kinesio-Taping .**
	6.	**Knee Osteoarthritic**
Classification number	**:**	**000.000.**
Pagination	**:**	**155 p.**
Arabic Title Page	**:**	**التحريك المفصلى السلبى و لاصقة الكينيسو على مرضى الإلتهاب المفصلى العظمى لمفصل الركبة.**
Library register number	**:**	**4159-4160.**

Author	**:**	**Aliaa Mohamed Ali El-abd**
Title	**:**	**Efficacy of Kinesio Taping and Postural Correction Exercises on Mechanical Neck Dysfunction**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Haytham Mohamed Elhafez**
	2.	**Hussien Abd Elrahman Hussien**
	3.	**Abeer Ramadan Ibrahim**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Mechanical Neck Dysfunction (MND) affects about two thirds of people in middle age with common cause of bad posture in people who spend much of their working day at a desk with a bent-forward posture. Kinesio taping (KT) is a new therapeutic modality to correct and treat many musculoskeletal disorders. Postural correction is a common treatment approach includes repetitions of cervical and scapular retraction. Purpose: it was to determine the effect of kinesio taping and postural correction exercises on neck pain level, neck disability, cervical spine curvature, cervical muscles activation amplitudes and frequencies in patients with MND. Methods: Forty five patients from both sexes with age ranged from 20-35 years with MND were participated in this study. They were assigned randomly and equally to three equal groups. Pain, neck disability, cervical curve, dominant upper trapezius and levator scapula muscles activities were measured pre and post treatment by visual analogue scale (VAS), neck disability index (NDI), flexible ruler, electromyography (EMG) respectively. Each patient's group received 2 treatment sessions per week for four weeks; group A received kinesio taping, group B received postural correction exercises, and group C received both. Results: There was a significant decrease in VAS, NDI, upper trapezius (UT) and levator scapula (LV) normalized root mean square, and significant increase in cervical curve, UT, and LV median frequencies in all 3 groups with highest difference for group C. Conclusion: The results suggest treatment of MND with both kinesio taping and postural correction exercises as it has greater effect than separate modality.

Key words	**1.**	**Mechanical neck dysfunction**
	2.	**Kinesio taping**
	3.	**Postural correction exercises**
Classification number	**:**	**000.000.**
Pagination	**:**	**171 p.**
Arabic Title Page	**:**	**فاعلية لاصقة الكينيسيو وتمرينات تصحيح القوام علي الخلل الوظيفي الميكانيكي للرقبة.**
Library register number	**:**	**4495-4496.**

Author	**:**	**Amal Amgad Mohammmed Elkholy**
Title	**:**	**Efficacy of foot reflexology on selected stress hormone in obese females**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Neveen Abdel Ltif**
	2.	**Azaa Mohamed Atya**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Obesity, especially central obesity is an important risk factor for the development many of diseases heavily predispose to cardiovascular disease as diabetes mellitus type 2, high blood pressure, high blood cholesterol, and triglyceride levels (combined hyperlipidemia). Reflexology is acoplementry therapy based on the principles that there are reflexes in the feet and hands that correspond to all organs, glands, and parts of the body. Its goal is to encourage the release of blockages/congestion in and around the nerve endings in the feet and hands while stimulating circulation and improving nerve and blood supply throughout the entire energy system. The- purpose: to determine the effect of foot reflexology on cortisol stress hormone in obese females. Subjects and methods: Twenty obese females participated in this study including class I or class II obesity with BMI ranged from 30 to 39.9 and waist circumference ≥88 cm. Their age ranged from 20 to 30 years. All females received foot reflexology (right and left foot). Stress value and stress cortisol hormone were evaluated before and after foot reflexology treatment using perceived stress scale and Elisa .Results: revealed that there was a significant balance in cortisol stress hormone and significant improvement of the stress value after foot reflexology treatment ($p<0.05$). In conclusion: foot reflexology is effective and show balance in cortisol stress hormone and improvement in stress value

Key words	**1.**	**Obesity.**
	2.	**Cortisol stress hormone**
	3.	**Reflexology.**
	4.	**obese females**
	5.	**stress hormone .**
Classification number	**:**	**000.000.**
Pagination	**:**	**81 p.**
Arabic Title Page	**:**	**تأثير برنامج الانعكاس القدمي علي هرمون الضغط العصبي للإناث البدينات.**
Library register number	**:**	**4117-4118.**

Author	**:**	**Amina Basher Saleh**
Title	**:**	**Effect of Laser Puncture on Mechanical Low Back Dysfunction**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohsen Mohamed El-Sayyad**
	2.	**Azza Atia**
	3.	**Murad Lenghi**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Back ground : Low back dysfunction LBD is a major health problem and a major cause of medical expenses and disablement .Laser puncture therapy can be used to treatment musculoskeletal disorder such as back pain. Purpose :To investigate the effect of the laser puncture on pain ,ROM, and function in activities of daily living in cases with low back dysfunction. Method : Subjects: Thirty patients 17female and 13 male with LBD, aged from 40 to 60 years, were randomly assigned into two treatment groups . Subjects in the control group (A) (n=15) with a mean age (45.7±6.6) years, mean weight (77.4±10.4) Kg , mean height (169.3±21.7) cm . Where subject in experimental group (B) (n = 15) with a mean age (46.4±6.7) years, mean weight (79.1±12.8) Kg, mean height (170.7±10.1) cm participated in this study. Control group (A)(n=15)received traditional physical therapy treatment (infrared radiation , ultrasonic and therapeutic exercise). And experimental group (B) (n = 15) were treated with infrared radiation, ultrasonic , therapeutic exercise as well as laser therapy in three days / week for four weeks. Measurement of pain level was assessed by VAS, patients functional disability was assessed by Oswestry disability index and back ROM by BROM device. Were assessed before and after treatment in both groups .Result: Showed that a significant effect of laser puncture on pain level , Pain Intensity as the mean value of pre-treatment was in (A) (4.9 ±1.3)and(B) (6.9±1.1) for post treatment was in (A) (3.2 ± 1.5) and (B) (3.5±1.2), functional disability pretreatment was in(A)(50.9± 15.3) and (B) (51.9±13.4) for post treatment was in(A) (41.7 ± 15) and (B)(28.7±12.6) ,back ROM in patients pre-treatment was in(A) (122.9 ± 12.8) and (B)(131.6±10.9)for post treatment was in (A) (127.7± 11.1)and(B)(135.2±9.8) with mechanical low back dysfunction. Conclusion : It was concluded that treatment with laser puncture were effective in reducing pain level ,functional disability and improving back Rang of motion.

Key words	**1.**	**low-level laser Therapy**
	2.	**Low Back Dysfunction**
	3.	**Laser Puncture.**
	4.	**Mechanical Low Back Dysfunction**
Classification number	**:**	**000.000.**
Pagination	**:**	**93 p.**
Arabic Title Page	**:**	**تأثير الوخز بالليزر علي الخلل الوظيفي الميكانيكي أسفل الظهر.**
Library register number	**:**	**4562-4563.**

Author	**:**	**Asmaa Hossam Eldein Ali Mohamed**
Title	**:**	**Effect of Induced Fatigue on Dynamic Postural Balance in Healthy Young Adults**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima Mohamed Kattabei**
	2.	**Enas Elsayed Mohamed Abutaleb**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Fatigue may impair the proprioceptive and kinesthetic properties of joints which influences dynamic balance, that is essential in activities of daily living and for optimal performance in sport activities. Purpose: To investigate the effect of induced whole body fatigue on dynamic balance including overall stability index (OSI), anteroposteriorstability index (APSI) and mediolateralstability index (MLSI).Subjects: thirty subjects from both genders were selected from students of Faculty of Physical Therapy, Cairo University, their mean age (18.46 ± 0.57) years, as one group . Methods: In a pre test-post test design, treadmill was used to induce whole body fatigue , Biodex Balance System was used to assess dynamic balance before and after fatigue induction by measuring the Overall stability index (OSI), anterior/posterior stability index (APSI) and Medial/lateral stability index (MLSI), at level four for each participant. Results: There was significant decreasing in dynamic balance with percentage of change 93.61% in OSI, 96.59% in APSI and 90.71% in MLSI immediately after induced fatigue(p = 0.0001).Conclusion: according to the findings of this study, it was concluded that induced whole body fatigue decrease the dynamic postural balance in healthy young adults.

Key words	**1.**	**Fatigue**
	2.	**Balance**
	3.	**Proprioception**
	4.	**Balance in Healthy Young Adults**
	5.	**Dynamic Postural**
		Healthy Young Adults
		Young Adults
Classification number	**:**	**000.000.**
Pagination	**:**	**76 p.**
Arabic Title Page	**:**	**تأثير الإجهاد المستحدث عل الاتزان الديناميكي في البالغين الأصحاء .**
Library register number	**:**	**4271-4272.**

Author	**:**	**Aya T-Allah Eissa Hassan**
Title	**:**	**Dynamic balance assessment: Influence of unilateral shoulder bag on dominant and non-dominant side in normal subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima M. Kattabi.**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Carrying bags is famous in our society especially unilateral shoulder bags. Most university students carry unilateral shoulder bags and they don't care about how he/she should carry them to be more balanced. Purpose: To determine the best way of providing dynamic balance while carrying a unilateral shoulder bag on the dominant side and non-dominant side and compared with not carrying a bag in normal subjects. Subjects: Sixty student volunteers from both genders aged 18 to 25 years old. Methods: Each student stood on the biodex balance system to measure the dynamic balance without carrying a bag then, with carrying a unilateral shoulder bag on the dominant shoulder and on the non-dominant shoulder with a rest period in between trials. Results: There was a significant difference in OSI between without carrying a bag and carrying a unilateral shoulder bag on the dominant side (p-value= 0.001), but there wasn't significant difference between without carrying a bag and carrying a unilateral shoulder bag on the non-dominant side (p-value=0.132) and between carrying a unilateral shoulder bag on the dominant and non-dominant side (p- value =0.227).There was a significant difference in APSI between without carrying a bag and carrying a unilateral shoulder bag on the dominant side (p value =0.002), but there wasn't significant difference between without carrying a bag and carrying a unilateral shoulder bag on the non-dominant side (p-value =0.550) and between carrying a unilateral shoulder bag on the dominant and the non-dominant side (p-value =0.180).There was a significant difference in MLSI between without carrying a bag and carrying a unilateral shoulder bag on the dominant side (p-value =0.001), but there wasn't significant difference between without carrying a bag and carrying a unilateral shoulder bag on the non-dominant side (p-value =0.074) and also between carrying a unilateral shoulder bag on the dominant and the non-dominant side (p-value =0.492).Conclusion: It was concluded that carrying a unilateral shoulder bag on the non-dominant side for right handed dominant subjects didn't disturb the dynamic balance when compared to carrying on the dominant side so, we recommend that students to carry unilateral shoulder bags on the non-dominant side.

Key words	**1.**	**A unilateral shoulder bag**
	2.	**The dynamic balance**
	3.	**The dominant side**
	4.	**The non-dominant side**
	5.	**The biodex balance system**
Classification number	**:**	**000.000.**
Pagination	**:**	**72 p.**
Arabic Title Page	**:**	**دراسة للأستدلال على الوضع الافضل لحمل حقيبة الكتف على جانب واحد وذلك بتقييم التوازن الحركى وتاثير حمل حقيبة الكتف على جانب واحد على الجانب السائد والجانب الغير سائد عند الأشخاص الأصحاء.**
Library register number	**:**	**4307-4308.**

Author	**:**	**Dina Al –Amir Mohamed Hussein**
Title	**:**	**Relation Between Hamstring Tightness, Sacropelvic Morphol And Balance In Normal Subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Fatma Sadeek Amin**
	2.	**Doaa Ibrahim Amin**
	3.	**Sahar Mahmoud Abd El Salam**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Hamstring tightness is a common condition found in symptomatic and asymptomatic subjects. Tightness of this muscle can play a role in low back pain, postural deficits, lumber spine disorder and sport related injuries. Purpose of this study: was to investigate the relation between hamstring tightness, sacropelvic morphology and balance in normal subjects. Subjects and Methods: Thirty normal subjects with their mean age, weight, height and BMI were (19.6±0.9 years, 65.4±5.4kg, 173.8±8.5cm and 21.7±1.7kg/m^2) respectively of both genders participated in this study. Subjects were classified into two equal groups group A: was consisted of fifteen subjects. They were without hamstring tightness. Group B: was consisted of fifteen subjects. They were with hamstring tightness. Methods: The tightness was assessed with active knee extension test and sacropelvic morphology was assessed from x-ray image by using surgimap software. Results: showed that there was a significant difference between hamstring flexibility and sacropelvic balance and a significant difference between hamstring flexibility and sacropelvic morphology as p value was (< 0.0001 and 0.0487) respectively Conclusion: this study has been designed to help in setting a rehabilitation program for postural deficits, low back pain, balance and gait abnormalities.

Key words	**1.**	**hamstring flexibility**
	2.	**sacropelvic morphology**
	3.	**active knee extension test**
	4.	**Balance.**
Classification number	**:**	**000.000.**
Pagination	**:**	**80 p.**
Arabic Title Page	**:**	**العلاقه بين القصر في عضلات الفخذ الخلفيه والتشكيل العجزى الحوضي والاتزان في الاشخاص الاصحاء.**
Library register number	**:**	**4333-4334.**

Author	**:**	**Elham Kassab Abdel-Latief Kassab**
Title	**:**	**Influence of slumped sitting posture on cervical curvature and functions among office workers**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Fatma Sediek Amin**
	2.	**Manar H Abdel-Sattar**
	3.	**Ghada Abdel-Moneam Abd-Allah**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: There is nearly double the risk for developing neck related functional disabilities to office workers, sitting most of their day with improper position. Duration of work, position of sitting, type and use of input devices are also associated with neck pain at work. Poor neck posture, where neck flexion is exaggerated (slumped forward) is noted and affecting their activity of daily living. Purpose: The purpose of this study was to investigate the influence of slumped/slouched sitting posture on cervical curvature and functional level among office workers. Study Design: One shot survey study of 30 subjects were chosen to participate in this study.Subjects:30 normal office workers participated in this study from both genders. Their ages ranged from 30 to 35 years with a mean (32.5 ± 1.63 years) and working period was 7-10 years. Method: Absolute rotation angle (ARA) was measured on lateral cervical radiographs to determine angle of cervical curvature between C2-C7. Neck Disability Index (NDI) was used to determine level of functional disabilities of the neck. Results: There was a significant hyperlordosis of the cervical spine of the study group which the mean ± SD absolute rotation angle (ARA) was 44.5 ± 6.03 degree. There was sever functional disability of the cervical spine in the study group which the median neck disability index was 54. There was strong positive significant correlation between absolute rotation angle and neck disability index (r = 0.71, p = 0.0001).Conclusion: Slumped sitting posture has a great influence on cervical curvature and functions among office workers. It was concluded that slumped sitting posture causes cervical hyperlordosis and functional disability of the neck. Also, by increasing angle of the cervical curvature, there was increasing in level of functional disability of the neck.

Key words	**1.**	**Slumped sitting posture**
	2.	**Cervical curvature**
	3.	**Cervical functions**
	4.	**office workers**
Classification number	**:**	**000.000.**
Pagination	**:**	**102 p.**
Arabic Title Page	**:**	**تأثير وضع الجلوس المرتخى المنحنى للأمام على انحناء ووظائف الفقرات العنقية للعاملين بالمكاتب.**
Library register number	**:**	**4127-4128.**

Author	**:**	**Haitham Ahmad Mo'men Al-Masry**
Title	**:**	**Efficacy of Different Techniques of Kinesio Taping on the Treatment of Chronic Mechanical Low Back Dysfunction**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohsen Mohamed El Sayyad**
	2.	**Hatem Abd El Rahman Ahmed**
	3.	**Amr Abd El Samad Abo Gazia**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: chronic mechanical low back dysfunction is one of the most common disabilities in working population. Different techniques of Kinesio taping (H technique and cross X) are used on the treatment of chronic mechanical low back dysfunction. Little information was available on which of these techniques is more effective than the other. The purpose: of this study was to investigate the efficacy of different techniques of Kinesio taping on the treatment of chronic mechanical low back dysfunction. Methodology: forty five patients (females and males) who had chronic mechanical low back dysfunction, their age ranged from 40 to 50 years were randomly selected. Design of study: the patients were randomly assigned into three equal groups (45 patients) ; group A (experimental) 15 patients received (H Technique of Kinesio tape, stretching exercises for back muscles and strengthening exercises for back and abdominal muscles) 3 times per week over 4 weeks period ; group B (experimental) 15 patients received (Cross (X) technique of Kinesio tape, exercises as in group A) 3 times per week over 4 weeks period ; group C (control) 15 patients received traditional program (infrared, ultrasonic, exercises as in group A) 3 times per week over 4 weeks period. Pain severity, Functional disability and Back range of motion were measured by using visual analog scale, oswestery disability questionnaire and bubble inclinometer respectively before the treatment and after treatment. The results: Within groups, there was a significant decrease in pain intensity and functional disability in the 3 groups. The percentage of improvement in pain reduction within group (A) was 63.1%, group (B) was 62.3% and group (C) was 68.1%. The percentage of improvement in function within group (A) was 52.9%, group (B) was 58.5% and group (C) was 49.5%. Also there was a significant increase in back ROM (flexion, extension, right side bending and left side bending) in the 3 groups. The percentage of improvement in flexion ROM within group (A) was 65.8%, group (B) was 74.5% and group (C) was 63.8%. The percentage of improvement in extension ROM within group (A) was 60.6%, group (B) was 73.4% and group (C) was 54.1%. The percentage of improvement in right side bending ROM within group (A) was 54.5%, group (B) was 70.9% and group (C) was 49.6%. The percentage of improvement in left side bending ROM within group (A) was 122.5%, group (B) was 73.1% and group (C) was 49.2%. Between groups, there was no statistical significant difference between group (A) and (B) in terms of pain, function and ROM, there was no statistical significant difference between group (B) and (C) in terms of pain, function and ROM, there was no statistical significant difference between group (A) and (C) in terms of pain, function and flexion ROM, there was a statistical significant difference between group (A) and (C) in terms of (extension ROM, right side bending and left side bending). Conclusion: Application of H technique of Kinesio tape or Cross (x) technique of Kinesio tape on the treatment of chronic mechanical low back dysfunction patients shows a significant improvement in the terms of pain severity, functional disability and back ROM. There was no statistical significant difference between H technique of Kinesio tape and Cross (X) technique of Kinesio tape in terms of pain severity, functional disability and back ROM. So it was advisable to use H technique of Kinesio tape or Cross (X) technique of Kinesio tape in the treatment of chronic mechanical low back dysfunction patients.

Key words	**1.**	**Chronic Mechanical Low Back Dysfunvtion**
	2.	**Kinesio Taping**
	3.	**H technique**
	4.	**Low Back Dysfunction**
Classification number	**:**	**000.000.**
Pagination	**:**	**100 p.**
Arabic Title Page	**:**	**فاعلية التقنيات المختلفة للشريط اللاصق كينيسيو فى علاج الخلل الوظيفى المزمن لأسفل الظهر.**
Library register number	**:**	**4095-4096.**

Author	**:**	**Hayam Mahmoud Hamza Ahmed**
Title	**:**	**Phonophoresis versus Iontophoresis in Supraspinatus Tendinitis**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Haytham Mohamed Elhafez**
	2.	**Hussien Abd Alrahman Hussien**
	3.	**Rania Refaat**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Purpose: The purpose of this study was to compare the effect of Phonophoresis versus Iontophoresis in relieving pain and increase range of motion in patients with supraspinatus tendinitis. Method: 30patients with supraspinatus tendinitis were divided in two groups (A) 15 patients received lidocaine hydrochloride 2%gel Phonophoresis with 1MHz and intensity 1.5W/cm2 for 5 min for 12 sessions and each session time was 35 min, (B) 15 patients received lidocaine hydrocloride 2% solution Iontophoresis with current intensity 0.5mA/min for 5 min. for 12 sessions and each session time was 35 min, Results: Statistical analysis revealed that there was a significant increase in shoulder range of moion (flexion, abduction, external rotation) measured by inclinometer between before and after treatment in group A. (17.77%,23.43%,27.27%) in group B (18.97%, 39.82%,52.83%)and significant decrease in the pain level measured by VAS between before and after treatment in the two experimental groups with percentages of (43.03%,89.87%). Conclusion: there is a significant improvement in ROM of both groups with increased percentage in iontophoresis application. Pain is deceased significantly in iontophoresis group than phonophoresis group.

Key words	**1.**	**Phonophoresis**
	2.	**Iontophoresis**
	3.	**Supraspinatus Tendinitis**
Classification number	**:**	**000.000.**
Pagination	**:**	**89 p.**
Arabic Title Page	**:**	**إدخال الأيونات عن طريق الموجات فوق الصوتية مقابل المداواه بالرحلان الايونى فى التهاب الوتر فوق الشوكى.**
Library register number	**:**	**4301-4302.**

Author	**:**	**Hend Ali Mohamed Mhmoud**
Title	**:**	**Effect of Handgrip Exercise on Electromyographic Activity of Contra Lateral Rotator Cuff**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Maher Ahmed El-Keblawy**
	2.	**Yasser Mohamed Aneis**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Back ground: cross education effect transfer is a well-known phenomenon that unilateral training produces an increase in strength of the contralateral untrained muscle group. The purpose of thecurrent study was to investigate the effect of hand grip training on the electromyographic activity of the contra lateral rotator cuff in normal individuals. Subjects Thirty subject from both sexes (15 female and 15 male) with age ranged from 25 to 30 were participated in present study. All subjects were apparently normal with mean age of 27.53 ± 0.34 and mean BMI of 29.40 ± 2.48 kg/ m^2.Design of the study: Pre test Post test design.Methods:Electromyographic activity of supraspinatus (SSP) and infraspinatus (ISP) dominant limb were assessed by electromyography (EMG) at these different -muscles in non angles (30º, 60º, 90º) of shoulder abduction pre and post hand grip training by Hand Grip Squeezer Tool for 30 minutes. Results:The result revealed a significant increase inelectromyographic activity (EMG) of both supraspinatus and infraspinatus muscles at different angles (30º, 60º, 90º) of shoulder abduction in both limbs post-training in relation to pre-training. No significant differences were detected in between the three angles 30º, 60º, and 90 º with regard to the EMG activity of infraspinatus muscles. Regarding supraspinatus muscles, there was asignificant difference in between angles, where angle 60º was significantly higher than angle 90º.Conclusion:These results revealed increase in EMG activity (amplitude, Root Mean Square RMS) of contralateral rotator cuff after hand grip exercise of ipsilateral limb.

Key words	**1.**	**Maximal voluntary contraction**
	2.	**Electromyographic activity**
	3.	**Rotator cuff**
	4.	**Handgrip Exercise.**
	5.	**Contra Lateral Rotator Cuff**
Classification number	**:**	**000.000.**
Pagination	**:**	**118 p.**
Arabic Title Page	**:**	**تأثير تمرين قبضة اليد على نشاط رسم العضلات الكهربي للعضلات المديرة الجانبية المقابلة.**
Library register number	**:**	**4563-4564.**

Author	**:**	**Hesham Mohamed Mohamed Abousaida**
Title	**:**	**Efficacy of Selected Physical Therapy Approaches in Pain Management: Systematic Review**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Prof. Dr. Neveen Abdelatif Abdelraouf**
	2.	**Ass. Prof. Dr. Amira Hussien Draz**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: pain is an effective problem in the patient complain list, which decrease his life quality, occupational level, psychological state mode and activties of daily living. Adequate pain management is essential and to reach the optimum outcome, the patient individual consideration must be regarded, which makes the trends of multidisciplinary, approaches more clinically used. Physical therapy as one of multidisciplinary approaches is used and summarizing its effects and evidence is important in clinical decision. Purpose: systematically review the efficacy of Transcutnous electrical nerve stimulation (TENS), Therapeutic Exercises, Ultra sound (US), low level Laser therapy (LLLT) in pain management. Study design: systematic review of randomized controlled and repeated measurement experimental trails Methods: searching The United States National Library of Medicine (MEDLINE), The Physiotherapy Evidence Database (Pedro), Cochrane Central Register of Controlled Trials and Google scholar the search were for the studies published form Jan 2000 until Jan 2014. The included studies were considers normal subjects who undergo the experimental pain in age range from 18 -60 years this rang to avoid the unreliable individuals. Studies quality evaluation are done by using Modified Oxford Scale and critical appraisal by comprehensive 10 questionnaire; only studies which are met our criteria have been included in the review. Results: High level of evidence that support TENS effectiveness, acceptable level between low and moderate for exercises, and moderate to high level for US and modrate level Laser therapy. Conclusion: TENS is an effective modality for pain management and application's parameters should manipulated with each other as correlating items not separately. Exercises are an accepted modality for induced hypoalgesia, but the mechanism and effective dose parameters are still a challenging issue of research. US are effective in improving surface anesthesia of lidocaine and no evidence for its effectiveness alone. LLLT is effective modality in reducing pain with local effect not systematic.

Key words	**1.**	**Pain Management**
	2.	**Systematic Review**
	3.	**TENS**
Classification number	**:**	**000.000.**
Pagination	**:**	**205 p.**
Arabic Title Page	**:**	**دراسة منهجية لفاعلية وسائل العلاج الطبيعي في علاج الألم**
Library register number	**:**	**4393-4394.**

Author	**:**	**Ibtesam Abdelkareem Ali Mohammed**
Title	**:**	**Effect of Low Laser Therapy Versus Stripping Massage Technic on Upper Trapezius Myofascial Trigger Points**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Ragia Mohammed Kamel**
	2.	**Yousry Mahmoud Mostafa**
	3.	**Rania Reffat Ali**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Purpose: The purpose of this study was to compare the effect of low level laser against stripping massage on upper trapezius myofascial pain syndrome. Method: Thirty patients with upper trapezius myofascial trigger points (15 males and 15 females), with age ranged from 20 to 30 years old participated in this study. They were assigned into three equal groups each one has 10 patients : group A received low level laser and stretching exercise for 4 sessions. Group B received stripping massage and stretching exercise for 4 sessions. Group C (control group) received stretching exercise for 4 sessions. Pressure algometry, Neck disability index and Visual analogue scale were used to evaluate patients before and after application of low level laser, stripping massage and stretching exercise after 4 sessions. Results: Statistical analysis revealed that there was a significant increase in pressure pain threshold, decrease in pain level and function post treatment with low level laser, stripping massage and stretching exercise in the three groups. At post treatment, the between group analysis revealed a significant difference between groups in the favor of group B for PPT (A 233.33%, B 338.18% and C 57.4%), VAS (A 71.835%, B 78.48% and C 29.72%) and NDI (A 47.16%, B 68.24% and C 25.73%). Conclusion: Low level laser and stripping massage are effective methods of treatment of upper trapezius myofascial trigger points in advance to stripping massage.

Key words	**1.**	**Myofascial trigger points**
	2.	**Stripping Massage**
	3.	**Low Level Laser Therapy**
	4.	**Upper Trapezius .**
Classification number	**:**	**000.000.**
Pagination	**:**	**108 p.**
Arabic Title Page	**:**	**تأثير الليزر منخفض الشده مقابل تقنية التدليك التجريدى على نقاط الالم العضلى الليفى فى الجزء العلوى من العضلة شبه المنحرفة.**
Library register number	**:**	**4311-4312.**

Author	**:**	**Mahitab Hassan Hussein**
Title	**:**	**Effect of low level laser therapy on rotator cuff injuries A systematic review**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Awatef Mohamed Labib**
	2.	**Ghada Ismael Mohamed**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	
objective of this study is systematically reviewed randomized control trail investigated the efficacy of LLLT in treating various symptoms of SAIS . Methods: Detailed searching the electronic data base from the year 2000 till now was conducted and only randomized controlled trails (RCT) studying the effect of LLLT on SAIS and where the inclusion criteria are applicable were selected . After exclusion the invalid studies only five trails were included in the review . Assessment of methodological quality of the studies was performed using PEDro scale and the data was extracted from them .According to PEDro scale five trails was of high quality they scored 6 out of 10. Results: Meta-analysis was performed in order to pool together the results of the studies. The effect of LLLT was found statistically significant on the functional assessment scale score, ROM scale score , functional status scale score , visual analogue scale score . Conclusion: LLLT was found to have statistically significant effects on pain , ROM and quality of life .The results might be dependent on the dosage , wavelength or point of application , though further investigations are critically needed to establish stronger evidence based knowledge .		
Key words	**1.**	**Systematic review**
	2.	**Randomized controlled trials**
	3.	**Evidence based medicine**
	4.	**low level laser therapy.**
	5.	**rotator cuff injuries.**
Classification number	**:**	**000.000.**
Pagination	**:**	**93 p.**
Arabic Title Page	**:**	**تاثير العلاج باليزر منخفض الشدة فى معالجة اصابات كفة مدور مفصل الكتف (مراجعة منهجية).**
Library register number	**:**	**4277-4278.**

Author	**:**	**Mahmoud Hosny Mahmoud Elsaied**
Title	**:**	**Efficacy Of Ultraviolet A With Psoralin In Treatment Of Chronic Eczema**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohamed Mahmoud Abd El KhalekKhalaf,**
	2.	**Hany Mohamed Azz El Dine El nzer**
	3.	**MahaAbd El Monem Hassan**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background:Eczema is a non-contagious disorder characterized by chronically inflamed skin and intolerable itching. Eczema is a complex trait with important genetic and environmental influences. Purpose:To investigate the effect of ultraviolet A radiations with Psoralen in treatment of eczema. Methods: Thirty patients of both sexes diagnosed as chronic eczema were randomly divided into two groups,15 patients each group; group (A) received only medical treatment (oral psoralen two times every day) , group (B) received ultraviolet (A) with psoralen in addition to medical treatment. The patients received the treatment three times per week for 9 weeks. Eczema was assessed by ultrasonography and SCORAD Score. All measurements were taken before and at the end of the treatment. Results: The results obtained in the present study indicated that there was a significant improvement in the ultrasonography and SCORAD Scorein the ultraviloet (A) with psoralen group and there was non significant improvement in control group and also the results revealed that, there was a significant difference in study group in comparison to control group with p value (0.001).

Key words	**1.**	**Eczema**
	2.	**Ultraviolet A.**
	3.	**SCORAD Score**
	4.	**Psoralen**
	5.	**Ultrasonography**
Classification number	**:**	**000.000.**
Pagination	**:**	**89 p.**
Arabic Title Page	**:**	**تاثير الاشعة فوق البنفسجية بالاضافة لمادة السورالين لعلاج مرض الاكزيمة المزمن.**
Library register number	**:**	**4327-4328.**

Author	**:**	**Mahmoud Moawad Mahmoud**
Title	**:**	**Effect of Pulsed Low Frequency Magnetic Field on Obese Subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Amir Mohamed Saleh**
	2.	**Abeer Rmadan Ibrahim**
	3.	**Hany Farid Eid Morsy**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Obesity is a chronic disease characterized by excessive body fat that causes damage to the individual's health and is associated with comorbidities such as Diabetes mellitus, Hypertension and Vascular dysfunction. Common traditional treatments utilized for obesity include medications, surgical interference, exercises and diet programs. Rare studies have investigated magnetic field treatment for obesity. Purpose: To investigate the effect of pulsed low frequency magnetic field on obese subjects. Material and Methods: Forty obese subjects from both genders had body mass index from 30 to 40, their ages ranged from 35 to 45 years old were selected. Design of study: Pre test-post test-control group was used. Group (A) The experimental group: This group consisted of 20 obese subjects were received Pulsed Magnetic Field with frequency 15 Hz, intensity 60 gauss and duration 20 min. 3 times/weak for 2 months. Group (B) The control group: This group consisted of 20 obese subjects were received aerobic exercises using bicycle ergometer, 3times/weak for 2 months. All the subjects were assessed before and after treatment with body mass index and serum lipid profile. Results: Within 2 groups: There was a significant decrease in body mass index and triglyceride. In group (A) there was a significant increase in total cholesterol, low density lipoprotein and decrease in high density lipoprotein, In group (B) there was a significant decrease in total cholesterol, low density lipoprotein and increase in high density lipoprotein. Alpha level was set at (P<0.05). Conclusion: The application of low frequency pulsed magnetic field on obese subjects has a positive effect on body mass index and serum triglyceride, but it has a negative effect on high density lipoprotein, serum total cholesterol and low density lipoprotein.

Key words	**1.**	**Pulsed Low Frequency Magnetic Field**
	2.	**Serum Lipids**
	3.	**Body Mass Index**
	4.	**Obesity.**
Classification number	**:**	**000.000.**
Pagination	**:**	**104 p.**
Arabic Title Page	**:**	**تأثير المجال المغناطيسي النابض ذو التردد المنخفض علي الأشخاص البدناء.**
Library register number	**:**	**4181-4182.**

Author	**:**	**Moath Zayed Hawari**
Title	**:**	**Effect of Neck Positions on Hand Grip Strength in Healthy Norr Adults**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Haytham Mohamed El-Hafez**
	2.	**Doaa Ibrahim Amin.**
	3.	**Hamada Eid Seef Hassan.**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Objective: The purpose of this study was to assess the effect of the neck positions on hand grip strength in healthy normal adults. Material and Methods: 100 healthy subjects from both genders were participated in this study, they were recruited from faculty of physical therapy students, their age between (17-25 years), with mean age was 20.12 ± 1.43 years, mean height was 1.69 ± 0.07 meters while the mean weight was 69.3 ± 10.64 kilograms, and the mean value of Body Mass Index ratio was 24.1 ± 2.94. They were grouped into two groups equally according to gender. Hand grip strength and pinch strength were measured in seven different neck positions. Grip strength was measured by Jamar Hand held dynamometer, pinch strength was measured by Hydraulic Pinch Gauge and neck range of motion was measured by Cervical Range of Motion device. Results: t-test revealed that there was a significant statistical difference in hand grip strength and pinch strength when it measured in neutral position of the neck and in different position of the neck, and there was a significant statistical difference in hand grip strength and pinch strength in female and male groups. ANOVA test explained that there were no significant differences between studied grip strength at different neck positions for all subjects (F test = 0.665 and p<0.678). While ANOVA test for pinch strength explained significant differences between different neck positions for all subjects (F test = 26.286 and p<0.0001). Conclusion: Hand grip strength affected by changing the neck position in male and female healthy normal adults.

Key words	**1.**	**Neck positions**
	2.	**Hand grip strength**
	3.	**Pinch grip strength**
	4.	**Healthy normal adults**
	5.	**Normal Adults.**
Classification number	**:**	**000.000.**
Pagination	**:**	**125 p.**
Arabic Title Page	**:**	**تأثير أوضاع الرقبة على قوة قبضة اليد في الأشخاص البالغين الأصحاء.**
Library register number	**:**	**4351-4352.**

Author	**:**	**Mohamed Ahmed Soliman**
Title	**:**	**Effect of Kinesio Tape on Post Laminectomy Syndrome**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Amir Mohamed Saleh**
	2.	**Khaled El-Sayed Aiad**
	3.	**Mohamed Osama Hegazy**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Patients with post-laminectomy syndrome (P.L.S) often live with chronic pain and disability, which can cause significant distress. Their suffering may be exacerbated by financial pressure arising from inability to sustain employment. Kinesio taping (KT) is a new therapeutic modality to correct and treat many musculoskeletal disorders. It is based on natural healing process and it is beneficial in reducing pain and restoring function. The purpose: of this study was to investigate the efficacy of kinesio taping on post-laminectomy syndrome. Subjects: Forty five male patients with P.L.S participated in this study, their age ranged from 30-60 years. They were assigned randomly and equally into three groups; The first group consisted of 15 patients received Kinesio tape, the second group consisted of 15 patients received Kinesio tape and McKenzie' spinal extension exercises and the third group consisted of 15 patients received McKenzie' spinal extension exercises only. Design of the study: Pre test post test research design was conducted to investigate the effect of Kinesio tape on patients. Methods: Pain intensity, lumbar ROM and lumbar function disability were measured pre and post treatment by Visual Analogue Scale (VAS), OB Goniometer and Patient Specific Functional Scale (PSFS). Results There was asignificant decrease in VAS, a significant increase in lumber flexion ROM and significant decrease in functional disabilities in all three groups but no significant differences in back extension and side bending ROM. Conclusion: Kinesio Tape is an effective treatment in reducing pain, improving functional activities and improving lumber flexion range of motion in patients with post lamenictomy Syndrome.

Key words	**1.**	**Post Laminectomy Syndrome**
	2.	**Kinesio taping**
	3.	**McKenzie’ spinal extension exercises**
Classification number	**:**	**000.000.**
Pagination	**:**	**124 p.**
Arabic Title Page	**:**	**تأثير الشريط اللاصق الكاينسيو علي متلازمة بعد استئصال غضروف الظهر.**
Library register number	**:**	**4035-4036.**

Author	**:**	**Mohamed Bakr Taha Younes**
Title	**:**	**Influence of kinesio taping on spastic wrist flexors in hemiplegia**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Amir Mohamed Saleh**
	2.	**Kamel Hamouda Morsy**
	3.	**Amir Nazih Wadee**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Upper limb spasticity is one of the most common complications associated with stroke. Purpose: To investigate the influence of kinesio taping on spastic wrist flexors in hemiplegia. Design: A pre-test post-test experimental-control design. Subjects: Thirty hemiplegic patients from both genders (male\female:23\7) were selected from the outpatient clinic of Faculty of Physical Therapy; Cairo University. Their age ranged between (40 -65) years. Materials and methods: They were assigned randomly in two groups: group (A): Experimental group (n=15) received 12 physiotherapy sessions /3sessions per week and kinesio tapping treatment and group (B): Control group (n=15) received 12 physiotherapy sessions only /3 sessions per week. All patients were tested for Hoffmann reflex/myogenic response ratio (H/M ratio) before and after twelve physical therapy sessions using electromyography (EMG). Results: t-Test revealed that there was high statistical significant decrease in spasticity (p=0.0001) concerning experimental group (pre-test mean 48.27% ±13.9, post-test mean 33% ±9.2) but there was insignificant statistical increase in spasticity (p=0.0664) concerning control group (pre-test mean 47.9% ±9.01,post-test mean 49.15% ±8.3). Conclusion: treatment by using kinesio taping with physical therapy sessions had statistical significant decrease in spasticity than treatment by physical therapy alone.

Key words	**1.**	**hemiplegia**
	2.	**kinesio tape**
	3.	**spasticity**
	4.	**wrist flexors.**
Classification number	**:**	**000.000.**
Pagination	**:**	**128 p.**
Arabic Title Page	**:**	**تأثير شريط الكينيزيو علي تخشب العضلات القابضة للرسغ لحالات الشلل النصفى.**
Library register number	**:**	**4061-4062.**

Author	**:**	**Mohamed Gamal Hassan Mohamed**
Title	**:**	**Efficacy of Mckenzie technique in the treatment of pain and ner root function in the lower cervical radiculopathy.**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima Kattabei**
	2.	**Aliaa Attia Diab**
	3.	**Amr Abdalla Azzam**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: **Lower cervical radiculopathy is one of the most common causes of neck pain.*Purpose:* This study was conducted to investigate the effect of Mckenzie technique on pain and nerve root function of the lower cervical radiculopathy.*Subjects:* Thirty patients aged from 30 to 50 years with mean (39.93 ± 6.16 years) from both sexes divided into two groups of equal numbers (study and control group).*Material*:Both groups received manual physical therapy,strengthening exercises, and intermittent cervicaltraction. Additionally, the study group received Mckenzietechnique. All the treatment procedures were conducted three times per week for 6 weeks. Dermatomal somatosensory evoked potential (DSSEPs)and numericalanalogue scale (NAS) were taken at two intervals pre-treatment and post-treatment.*Results:*There was no significant difference between both groups post-treatment in DSSEPs(p = 0.09). and NAS(p = 0.22). For the study group, there was significant difference post-treatment in NAS(p = 0.0001) and DSSEPs (p = 0.0001). For the control group there was also significant difference in NAS (p = 0.0001)andin DSSEPs (p = 0.0001).Conclusion: The study showed that the addition of the McKenzie method to the physiotherapy program which includes manual physical therapy, intermittent cervical traction and cervical muscles strengthening has no significant effect on pain and nerve root function.**

Key words	**1.**	**Cervical**
	2.	**Pain**
	3.	**Mckenzei,Traction**
	4.	**nerve root function.**
	5.	**lower cervical radiculopathy.**
Classification number	**:**	**000.000.**
Pagination	**:**	**114 p.**
Arabic Title Page	**:**	**تأثير طريقة ماكينزي على وظيفة الجزع العصبي في مرض اعتلال الجزع العصبي للجزء السفلي من فقرات الرقبة**
Library register number	**:**	**4285-4286.**

Author	**:**	**Mohamed Marzouk Mohamed Ragab**
Title	**:**	**Maximal Isometric Contraction versus Submaximal Eccentric Contraction in Prevention of Delayed Onset Muscle Soreness**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Neveen Abdel-Latif**
	2.	**Reham Hussein Diab**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Delayed onset muscle soreness (DOMS) is the most common symptom when ordinary individuals and athletes are exposed to unaccustomed physical activity, especially eccentric contraction which impairs athletic performance; ordinary people work ability and physical functioning. A multitude of methods have been investigated to control DOMS. One of the valuable method to control DOMS is repeated bout effect as a prophylactic method. Purpose: To compare the repeated bout effect of maximal isometric with submaximal eccentric contraction on induced DOMS. Methods: Sixty normal male volunteers were assigned randomly into three equal groups: Group A (first study group): 20 subjects received submaximal eccentric contraction on non-dominant elbow flexors as a prophylactic exercise. Group B (second study group):20 subjects received maximal isometric contraction on non-dominant elbow flexors as a prophylactic exercise. Group C (control group):20 subjects did not receive any prophylactic exercises. Maximal isometric peak torque and patient related elbow evaluation (PREE) were measured for each subject 3 times before, immediately after and 48 hours after induction of DOMS. Results: Post-hoc test for peak torque and PREE scale immediately and 48 hours after induction of DOMS revealed that group (A) and group (B) resulted in significant decrease in maximal isometric strength loss and elbow pain and disability rather than control group (C), but submaximal eccentric group (A) was more effective than maximal isometric group (B) as it showed more rapid recovery of functional strength and less degrees of elbow pain and disability. Conclusion: Both submaximal eccentric contraction and maximal isometric contraction were effective in prevention of DOMS but submaximal eccentric contraction had the greatest protective effect.

Key words	**1.**	**Delayed onset muscle soreness**
	2.	**Maximal isometric peak torque**
	3.	**elbow evaluation scale**
	4.	**Muscle Soreness**
Classification number	**:**	**000.000.**
Pagination	**:**	**141 p.**
Arabic Title Page	**:**	**المقارنة بين أقصى انقباض ساكن والأنقباض الأستطالى الأقل من الأقصى فى الوقاية من الأحتقان العضلى المتأخر.**
Library register number	**:**	**4179-4180.**

Author	**:**	**Mohsen Ibrahim Taher Abuelsoad**
Title	**:**	**Efficacy Of Pulsed Electromagnetic Field Versus Low Level Laser In Diabetic foot Neuropathy**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohamed Elgendy**
	2.	**Kadrya Hosny**
	3.	**Hesham Menesy**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	
Background: Diabetic peripheral neuropathy (DPN) is one of the most common and disabling complication of diabetes mellitus.. Purpose: The purpose of this study was to investigate and compare between the effects of Pulsed Electro Magnetic Field (PEMF) and Low Level Laser Therapy (LLLT) on diabetic neuropathy (DN). Subjects: Thirty diabetic neuropathic patients (13 Males - 17 Females) from both genders were selected from out clinic of Damietta specialized hospital with age ranging from (45-55years). They were following instructions. The study was carried out from Jan 2015 to May 2015. They were divided into 2 equal groups; PEMF group (A) and LLLT group (B). Procedure: Group A received PEMF with frequency 50 HZ and intensity 20 gauss. Group B received LLLT with frequency 2000 HZ and intensity 9 joules. For both groups treatment conducted for 4 weeks, 3Times per week, day after day. Measurement were taken before and after 4 week of the treatment. Measurement of pain carried out by visual analog scale and assessment of peroneal nerve conducting velocity (NCV) was done by Computerized Electromyography device. The study was approved by the ethical committee of the faculty of physical therapy. The results: Results revealed that, there was a significant reduction of pain and significant increase of peroneal NCV in both groups (A and B) (P<0.05). Comparison between post treatment values of NCV showed significant difference (p-value= 0.027) with more improvement in group A. Conclusion: It could be concluded that, both PEMF and LLLT are effective in treatment of pain and NCV problems in diabetic peripheral neuropathy patients but PEMF was more effective.		
Key words	**1.**	**Pulsed Electro Magnetic Field**
	2.	**Low Level Laser Therapy**
	3.	**Diabetic Neuropathy**
	4.	**Neuropathic pain**
	5.	**Peroneal nerve conduction velocity**
Classification number	**:**	**000.000.**
Pagination	**:**	**108 p.**
Arabic Title Page	**:**	**مدي فاعلية المجال المغناطيسي مقابل الليزر منخفض الشدة على التهاب الأعصاب الطرفية فى مرضى القدم السكرى.**
Library register number	**:**	**4427-4428.**

Author	**:**	**Nagwa Salah Abdallah**
Title	**:**	**Efficacy of Shock Cryotherapy in Induced Muscle Soreness**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Neveen Abd El-Latif**
	2.	**Salah El Deen Bassit**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: A person experiencing delayed onset muscle soreness will notice pain and aching within the affected muscles, decreased range of motion and loss in muscle strength beginning 12-24 hours after exercise, peaking between 48 and 72 hours and subsiding within five to seven days post-exercise. The severity is variable, ranging from a mild discomfort to severe debilitating pain that limits the use of muscles. The purpose: of this study was to investigate the effect of locally applied shock cryotherapy on pain and function in induced muscle soreness. Design: A pre-test post-test design. Materials and methods: Thirty physically active subjects participated in this study. Subjects subdivided into two groups A and B, fifteen in each group.Their mean age ranged from (25 to 35) years old. Pre-exercise measures were recorded for pressure pain threshold and Patient-Rated Elbow Evaluation. Subjects participated in study were instructed to perform elbow flexion/extension of their non-dominant arm using a 10-lb dumbbell while sitting until reaching the point of fatigue The group A underwent ice treatment administered immediately after exercise by using shock master cryotherapy device at 12 degree Celsius (12° c) for 10 minutes once a day for four days at 0, 24, 48 and 72 hours after exercise. The group B underwent cold treatment using a flexible gel pack for 10-minutes once a day for four days at 0, 24, 48 and 72 hours after exercise. Pressure pain threshold and Patient-Rated Elbow Evaluation were assessed at 0, 24, 48 and 72 hours after exercise. Results: Significant differences were founding both groups in perceived pain and function starting at 48 h in both groups with better improvement in group A in which there was no significant difference in dependent variables at 72 h and 0 h in the group A. Conclusion: The pattern of data suggested that cryotherapy is effective in minimizing the symptoms associated with muscle soreness and cryotherapy devices are more effective than cold pack($p < 0.05$).

Key words	**1.**	**Cryotherapy**
	2.	**delayed onset muscle soreness**
	3.	**eccentric exercise**
	4.	**Muscle Soreness**
Classification number	**:**	**000.000.**
Pagination	**:**	**102 p.**
Arabic Title Page	**:**	**تأثير الصدمة التبريدية على الألم العضلي المستحث.**
Library register number	**:**	**4295-4296.**

Author	**:**	**Nagwa sayed abdelwahed**
Title	**:**	**Influence of Microcurrent Electrical Stimulation on Blood Flow in Normal Subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Kadria Hosny Mohamed**
	2.	**Marzouk Abdel-Fattah Ellethy**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Blood flow is an important factor which can affect the repair and healing of injured tissues. There are many factors that may affect the blood flow. Electrical stimulation has been showed to produce long term changes in vascularization at the capillary level. Purpose: This study was done to investigate the influence of microcurrent electrical stimulation (MES) on blood flow in normal subjects. Participants: thirty healthy participants with mean age (28.77±3.501) years, and the mean value of their body mass index was (23.20±1.332) kg/m. Methods: Participants were assigned randomly into two equal groups; group (A) received high frequency MES with 125 Hz frequency for 30 min. while, group(B) received low MES with frequency 40 Hz for 30 min. All participants in both groups were assessed for Resistivity Index, Total blood flow volume, mean blood flow velocity and peak systolic velocity by using Ultrasonic Doppler before and immediately after microcurrent application. Results: Microcurrent electrical stimulation showed statistical significant improvement in blood flow resistivity index, total blood flow volume, mean blood flow velocity and peak systolic velocity in posterior tibial artery of normal healthy subjects, with significant statistical difference by using high frequency versus low frequency. Conclusion: the study revealed that both high frequency and low frequency microcurrent electrical stimulation were effective for improving the blood flow on the posterior tibial artery in normal healthy subjects.

Key words	**1.**	**Microcurrent electrical stimulation**
	2.	**Blood flow**
	3.	**Resistivity index**
	4.	**Total blood flow volume**
	5.	**Mean blood flow velocity**
	6.	**Ultrasonic Doppler**
Classification number	**:**	**000.000.**
Pagination	**:**	**88 p.**
Arabic Title Page	**:**	**تأثيرالتنبية بالتيارالكهربائى المتناهى فى الصغر على تدفق الدم لدى الأشخاص الطبيعيين.**
Library register number	**:**	**4193-4194.**

Author	**:**	**Nermeen Kareem Eid Bleedy**
Title	**:**	**Awareness about different physical therapy modalities used in treating postmenopausal osteoporosis**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Hala Mohamed Hanafy Omara**
	2.	**Hossam El-Dien Hussien Kamel**
	3.	**Engy Mohamed Ibrahim El-Nahas**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

This study was conducted to investigate awareness about different physical therapy modalities used in treating osteoporosis. Two hundred gynecologists and Five hundred postmenopausal women (from different hospitals in El-Fayoum Governorate), were participated in this study. They were asked to answer all questions of gynecologist's questionnaire and postmenopausal women questionnaire respectively. The results of the study revealed that 66.2% from gynecologists participated in this study reported their appreciation of the importance of physical therapy modalities for treating osteoporosis and 33.8% had no idea about the role of physical therapy modalities used in treating osteoporosis. Also, 52.9% from postmenopausal women heard about physical therapy modalities used in treating osteoporosis and 47.1% had no idea about the role of physical therapy modalities used in treating osteoporosis. So, it could be concluded that more awareness is needed for both gynecologists and postmenopausal women about physical therapy modalities used in treating osteoporosis.

Key words	**1.**	**Physical therapy modalities**
	2.	**osteoporosis**
	3.	**Postmenopausal women**
	4.	**Gynecologists**
Classification number	**:**	**000.000.**
Pagination	**:**	**70 p.**
Arabic Title Page	**:**	**مدى الإدراك بوسائل العلاج الطبيعي المختلفة المستخدمة في علاج هشاشه العظام لدى السيدات بعد انقطاع الطمث.**
Library register number	**:**	**4261-4262.**

Author	**:**	**Radwa Fayek Hammam Mansour**
Title	**:**	**Effect of Myofascial Trigger Point Pressure Release on Headache in Chronic Mechanical Neck Pain**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Ragia Mohammed Kamel**
	2.	**Salah El Din Bassit Ahmed**
	3.	**Amr Saber Elsayed**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Introduction: Headache is a common experience in adults. Recurring headaches negatively impact family life, social activity and work capacity. Purpose: The purpose of this study was to determine the effect of myofascial trigger point pressure release for upper cervical muscles on pain and functional ability on patients with cervicogenic headache. Method: Thirty patients with cervicogenic headache (12 males and 18 females), with age ranged from 20 to 40 years old participated in this study. They were assigned into two equal groups, each one has 15 patients: group A received myofascial trigger point pressure release plus stretching and isometric exercises for 12 sessions. Group B received isometric and stretching exercises only for 12 sessions. Smart Phone Inclinometer, Neck disability index and Visual analogue scale to measure pain and functional ability before and after the treatment program for both groups. Results: statistical analysis revealed that each of the pain intensity, the neck disability index, and the active range of motion of the neck were significantly improved in both groups with a favor to group A. Conclusion: Myofascial trigger point pressure release is an effective method for the treatment of cervicogenic headache.

Key words	**1.**	**Myofascial trigger point pressure release**
	2.	**Cervicogenic Headache**
	3.	**Smart Phone Inclinometer**
	4.	**Chronic Mechanical Neck Pain.**
	5.	**Pressure Release.**
Classification number	**:**	**000.000.**
Pagination	**:**	**113 p.**
Arabic Title Page	**:**	**تأثير الضغط الإنفراجى لنقاط النسيج العضلى الضام المستهدفة على الصداع في ألم العنق الميكانيكى المزمن.**
Library register number	**:**	**4493-4494.**

Author	**:**	**Raymon Fayek Bishara Abd-El-Shahied**
Title	**:**	**Polarized Light Versus Microcurrent In The Treatment Of Mechanical Low Back Pain**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Samy Abd El Samad**
	2.	**Ahmed Genedy**
	3.	**Sahar Adel**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Mechanical low back pain affects lumbar region without neurological deficit due to postural or occupational stress lead to irritation of pain sensitive tissue. Those patients characterized by reducing spinal mobility and painful functional activity. Purpose: To compare the effectiveness of polarized light versus microcurrent in the treatment of mechanical low back pain. Subjects: Forty five patients with mechanical low back pain for more than 3 months, their age ranged from 20–40 years. Methods: Patients were distributed into three equal groups 15 per each. Patients in group (A) received polarized light in addition to traditional physical therapy program and medical care for one month. Patients in group (B) received microcurrent in addition to traditional physical therapy program and medical care for one month. Patients in group (C) received traditional physical therapy program and medical care for one month. Pain and functional improvement are measured using serum cortisol level test and disability questionnaire index respectively before and after the treatment period. Results: Patients of group (A) and (B) (t-value (6.35),(-5.46) and (10.27),(-9.48)and P- value 0.000 in all) respectively showed a reduction in pain and functional improvement with no difference between both groups, even there was a significant decrease in pain and functional improvement in patients of group (C),the control group (t-value was (11.22), (-8.41)and P- value 0.000 in all). Conclusion: Both polarized light and microcurrent are effective in reducing pain and improving function in patients with mechanical low back pain, also traditional physical therapy program, with no difference between them.

Key words	**1.**	**Mechanical Low Back Pain**
	2.	**Polarized Light**
	3.	**Microcurrent**
Classification number	**:**	**000.000.**
Pagination	**:**	**138 p.**
Arabic Title Page	**:**	**الضوء المستقطب مقابل التيار الدقيق فى علاج ألم أسفل الظهر الميكانيكي.**
Library register number	**:**	**4137-4138.**

Author	**:**	**Reham Ali Mohamed Ali**
Title	**:**	**Influence of Sensory Electrical Stimulation On Hand Function i Patients With Stroke**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Hussein Ahmed Abd El Rahman Shaker**
	2.	**Ebtesam Mohamed Fahmy**
	3.	**Ayman Anwar Naseif**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Loss of hand function is a major source of impairment in neuromuscular disorders, frequently preventing effective occupational performance and independent participation in daily life .The severity of these motor impairments and their negative impact on hand function are reasons that encouraged researchers to investigate new methods to improve hand function in post stroke patients. Currently, treatment options targeting improving hand function in stroke patients are often costly and have poor patient compliance. The purpose of the current study was to assess the influence of the sensory electrical nerve stimulation on improving hand function in stroke patients. Patients and methods : Thirty stroke subjects, with age ranged from 40 to 65 years old participated in this study. Spasticity of the muscles of the affected hand (wrist flexors, fingers flexors and fingers adductors) was grade 1+ or less according to Modified Ashworth Scale. Design of the study : The study was done as a pre and post treatment experimental design and patients were assigned into two groups. Group (A) (Study group) included 15 patients; they received sensory electrical stimulation simultaneously task specific training program. Group (B) (Control group) included 15 patients; they received the same selected task specific training program only. Each patient was tested pre and post treatment by Modified Ashworth scale, Modified Medical Research Council Scale for measuring hand muscles strength (MRC) , Grip dynamometer, Pinch dynamometer, Digital goniometer and Action Research Arm Test Scale (ARAT). Treatment sessions was given three times a week for 1 month. The results : There was significant decrease of spasticity grades of elbow flexors and shoulder flexors and modified medical council scale post treatment in the study group only. There was significant improvement of hand grip. Pinch grip, wrist flexion and wrist extension range of motion and action research arm scale in both groups post treatment, the improvement was significantly higher in the study group compared to control group. There was a significantly increase of the mean values of modified medical council scale post treatment in both groups, the difference was not statistically significant between study group and control group. Conclusion: Combination of sensory electrical nerve stimulation and task orientated training had positive influence on improving hand function in stroke patients. So, it is recommended to add this protocol to the physical therapy program for stroke patients suffering from hand dysfunction to improve the treatment outcomes.

Key words	**1.**	**stroke**
	2.	**hand function**
	3.	**sensory electrical nerve stimulation**
	4.	**task specific training**
Classification number	**:**	**000.000.**
Pagination	**:**	**173 p.**
Arabic Title Page	**:**	**تأثيرالتنبيه الحسي الكهربائى على وظيفة اليد فى مرضى السكتة الدماغية.**
Library register number	**:**	**4259-4260.**

Author	**:**	**Sallam Ali Shoura Sallam**
Title	**:**	**Specific Lumbosacral Measurements: Influence of Prolonged Sitting Posture on Computer Users**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima Kattabei**
	2.	**Ahmed Mahmoud Kholaif**
	3.	**Enas Abu Taleb**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Sedentary position such as sitting for long times is harmful to the spine and may lead to back disorders, as in computer users, which result from changes in lumbosacral spine, predisposing to changes of back functional stability and mobility. Purpose: to investigate the effect of prolonged sitting posture on Lumbar Lordosis (LL), Sacral Slope (SS), Pelvic Tilting (PT), Pelvic Incidence(PI) and lumbar range of motion (LROM) in computer users. Material and methods: thirty two adult computer users of both genders participated in this study. Their age ranged from 20 to 35 years, with no musculoskeletal disorders or current back pain. Group A: "16" participants using computer from 8 to 10 years, classified into: A1: 8 participants using computer more than 5 hours daily. A2: 8 participants using computer from 2 to 5 hours daily. Group B: "16" participants using computer from 2 to 4 years, classified into: B1: 8 participants using computer more than 5 hours daily. B2: 8 participants using computer from 2 to 5 hours daily. X-ray device was used to obtain lateral lumbosacral radiographs; all radiographic measurements were calculated by using picture archiving and communication systems software. Back range of motion device (BROM II) was used to evaluate LROM. Results: One sample t- test revealed that there were significant changes in spinopelvic angles and LROM compared to normal values, Two way ANOVA showed a significant interaction effect of years and daily hours of computer usage on LL (p = 0.003), SS (p = 0.001), PT (p = 0.03) while, there was no significant interaction effect of years and daily hours of computer usage on PI (p = 0.55) and all lumbar ROM. Conclusion: Sitting for long times adversely affect the spinopelvic angles (LL, SS, PT and PI) and LROM in computer users. These changes occur in harmony between spine and pelvis.

Key words	**1.**	**Computer users**
	2.	**prolonged sitting**
	3.	**Lumbar spine**
	4.	**Lumbosacral Measurements.**
	5.	**Posture on Computer Users**
Classification number	**:**	**000.000.**
Pagination	**:**	**155 p.**
Arabic Title Page	**:**	**قياسات خاصة بالفقرات القطنية العجزية: تأثير وضعية الجلوس لفترات طويلة على مستخدمي الكمبيوتر.**
Library register number	**:**	**4335-4336.**

Author	**:**	**Shaimaa Ahmed Eid Ahmed**
Title	**:**	**Slump Stretch Versus Straight Leg Raising Techniques In Lumbar Disc Herniation**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Awatef M. Labeb**
	2.	**Soheir S. Rezk-Allah**
	3.	**Amr Hassan EL-Seyed**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Neural mobilization is an important addition which affects outcomes of physical therapy program in treatment of lumbar disc herniation. Although many attempts were done to determine the effectiveness of neural mobilization on pain intensity, function level .No study was done to investigate effect of neural mobilization on balance in my knowledge. The purpose: This study was conducted to investigate the effect of neural mobilization on pain intensity , function level and balance in patients with lumbar disc herniation. Material and methods: 30 patients with disc herniation. Their age ranged from 30 to 60 years .patients were divided into three equal groups. Group(A): received straight leg raising stretch and standardized physical therapy program in the form pelvic tilts, bridging, wall squats, and quadruped alternate arms/legs activities . group(B): received slump stretch and the same standardized physical therapy program. Control Group (C): received only the standardized exercise program. Pain intensity, function level and balance was measured by NPRS ,oswestry disability questionnaire and balance master before and after treatment program which continued for twelve sessions day after day Results: There was a significant improvement in pain intensity and function level post treatment in (A) and (B) group($p \leq 0.001, p=0.015$),while there was no significant change in Control Group (C). there was no significant difference in(DCL, RT ,End sway and walk speed) ($p=.41,.23,.07$and.51). Conclusion: It was concluded that neural mobilization may be an effective addition to the physiotherapy program in cases of lumbar disc herniation.

Key words	**1.**	**neural mobilization**
	2.	**lumbar disc herniation**
	3.	**balance master**
	4.	**Slump Stretch.**
	5.	**Straight Leg Raising Techniques.**
Classification number	**:**	**000.000.**
Pagination	**:**	**138 p.**
Arabic Title Page	**:**	**تقنية الشد الإنحنائي مقابل رفع الساق الممدودة في الفتق الغضروفي القطني.**
Library register number	**:**	**4207-4208.**

Author	**:**	**Shimaa Hosny Mohamed Abd Elrahem.**
Title	**:**	**Deep transverse friction massage in prevention of patellofemoral pain syndrome after anterior cruciate ligament reconstruction.**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Awatef Mohamed Labeb**
	2.	**Osama Mahmoud Elshaer**
	3.	**Marzouk Abd El Fatah Ibrahem**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background and Purpose: Physical training is recommended as an efficient therapy in patients with anterior cruciate ligament reconstruction. Massage therapy and orthopedic massage located published peer-reviewed studies on the effectiveness of integrating massage therapy into the postoperative rehabilitation of anterior cruciate ligament reconstruction. The aim of this study was to determine the effectiveness of trigger point deactivation by using deep transverse friction massage in the rehabilitation of post anterior cruciate ligament (ACL) reconstruction patellofemoral pain syndrome (PFPS), the primary complications following surgical repair of the anterior cruciate ligament. Methods: Thirty male patients with a reconstructed anterior cruciate ligament, aged 25–35 years, have been recruited for this study from The Air Force Hospital, Outpatient clinic. They were divided randomly into two groups equal in numbers: Group one (control group): they received a traditional progressive rehabilitation program starting 2 weeks after operation. Group two (experimental group): they received a progressive rehabilitation program plus trigger point deactivation therapy in the form of deep massage therapy. All the patients received 6 sessions per week for 2 months then 3 sessions per week for month and a follow up for another 3 months to complete the post anterior cruciate ligament rehabilitation. Then the patellofemoral pain was reassessed after the treatment for the two groups using the algometry and the numeric rating scale the functional activity was assessed using the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Results: revealed that there was a significant effect of deep friction massage on prevention of patellofemoral pain after anterior cruciate ligament reconstruction. Results showed that there was improvement of the patient functional activity (in the form of Pain, Stiffness, and Physical Function) which was assessed by the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC). Conclusion: 3 months of physical therapy rehabilitation including deep friction massage to the pre-patellar trigger points is considered a primary phase in preventing patellofemoral pain that may occur post anterior cruciate ligament reconstruction and improving the physical function of the patient post operative.

Key words	**1.**	**Deep transverse friction massage**
	2.	**Anterior cruciate ligament**
	3.	**Trigger points**
	4.	**Patellofemoral pain syndrome**
Classification number	**:**	**000.000.**
Pagination	**:**	**100 p.**
Arabic Title Page	**:**	**دور العلاج اليدوى (الاحتكاكى العميق) فى الوقاية من متلازمة ألم الرضفة بعد اعادة بناء الرباط الصليبى الأمامى.**
Library register number	**:**	**4173-4174.**

Author	**:**	**Shrouk Ibrahim Mohamed Ata**
Title	**:**	**Effect of Forward Head Posture Correction on Posture Balance**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Awatef Mohamed Labib**
	2.	**Ibrahim Moustafa Moustafa**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Purpose: This study was conducted to investigate the effect of forward head posture (FHP) correction on craniovertebral (CV) angle, cervical pain, and posture balance. Subjects: Thirty patients(13 male, 17 female) with chronic mechanical neck pain and CV angle less than 50º aged from 20-30 years with mean (26.69 ± 2.4) divided into two groups with equal numbers. Materials: Both groups received hot packs application, TENS, and mobilization 3 sessions per week. The exercise group additionally received a posture corrective exercise program. Lateral photography, pain self- efficacy questionnaire (PSFQ), and dynamic balance test were assessed at two intervals (pre-treatment, and 12 week post-treatment). Results: There was a significant difference in study group post treatment compare with pretreatment in PSEQ (p= 0.0001), CV angle (p=0.0001), over all stability index (OASI) (p= 0.0001), anterior/posterior stability index (APSI) (p- 0.0001), and medial/lateral stability index (MLSI) (p= 0.0001). There was a significant difference in control group post treatment compare with pretreatment in PSEQ (p= 0.01), CV angle (p=0.01), OASI (p= 0.005), APSI (p- 0.01), MLSI (p= 0.005). There was no significant difference pretreatment between study and control groups in PSEQ (p= 0.11), CV angle (p= 0.9), OASI (p= 0.81), APSI (p= 0.97), MLSI (p= 0.5). There was no significant difference post treatment between study and control groups in PSEQ (p= 0.11), CV angle (p= 0.33), MLSI (p= 0.84) but there was a significant decrease in OASI (P= 0.04), and APSI (P= 0.04). Conclusion: forward head posture correction using a posture corrective exercise program in addition to hot packs, TENS, and mobilization decreased pain and improved craniovertebral angle and balance.

Key words	**1.**	**Forward head posture**
	2.	**Balance**
	3.	**posture correction exercises**
Classification number	**:**	**000.000.**
Pagination	**:**	**104 p.**
Arabic Title Page	**:**	**تأثير تصحيح وضع الرأس الأمامي علي الاتزان.**
Library register number	**:**	**4153-4154.**

Author	**:**	**Tamer Osama Attia**
Title	**:**	**Effect of Kinesiotape on Patients with Carpal Tunnel Syndrome**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Amir Mohamed Saleh**
	2.	**Mohamed Osama Higazi**
	3.	**Doaa Ibrahim Amin**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Carpal tunnel syndrome is the most common neuropathy of the upper limb and a significant contributor to hand functional impairment and disability. Hand is an important part of body to perform the complex daily living activities. Purpose: To investigate the effect of Kinesio Taping on hand grip and nerve conduction velocity on patients with Carpal Tunnel Syndrome. Material and Methods: Thirty Carpal Tunnel Syndrome patients from both genders (17 female and 13 male) their Body Mass Index ranged from 30 to 40 Kg/m2 and their age ranged from 30 to 60 years old. Design of study: Pre test and post test Experimental control design and were randomly assigned into three groups ten patients in each group, Group (A) received traditional treatment (us and traditional excercise program for Carpal Tunnel Syndrome) for thirty minutes, three times per week for six weeks, Group (B) received traditional treatment program for Carpal Tunnel Syndrome in addition to wrist Kinesio taping technique and Group (C) received traditional treatment program for Carpal Tunnel Syndrome in addition medication. All participants were assessed before and after the end of treatment with hand grip dynamometer and nerve conduction testing. Results: Within the three groups: In Group (B) there was a highly significant increase in the hand grip strength and decrease in motor and sensory distal latencies of median nerve. Alpha level was set at ($p<0.05$). Conclusion: The application of wrist Kinesio Taping technique in addition traditional exercises program has a positive effect on hand grip strength and on motor and sensory distal latencies of median nerve in CTS patients.

Key words	**1.**	**Kinesiotape**
	2.	**Carpal Tunnel Syndrome**
	3.	**Electromyography**
Classification number	**:**	**000.000.**
Pagination	**:**	**89 p.**
Arabic Title Page	**:**	**تأثير شريط كينيزيو على مرضى متلازمة النفق الرسغى.**
Library register number	**:**	**4319-4320.**

Author	**:**	**Tarek Mohamed Selim**
Title	**:**	**Effect of Nintendo Wii Fit Plus system on balance in normal subjects**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Mohamed Hussein EL-Gendy**
	2.	**Ghada Ismail Mohamed Kamel**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: **The Nintendo Wii Fit plus is a popular virtual reality (VR) video gaming system in rehabilitation practice and research. As evidence emerges related to its effectiveness as a physical therapy training method, clinicians require information about the pragmatics of its use in practice.*The purpose:* This study was conducted to investigate the effect of Nintendo Wii Fit plus System on balance in normal subjects. *Subjects:* Twenty normal subjects were randomly divided into a study group: Ten normal subjects (3 females and 7 males) who received balance training by Nintendo Wii Fit plus system. Their mean ± SD age and BMI were 26 ± 1.76 years and 24 ± 0.94 kg/m² respectively. And a control group: Ten normal subjects (3 females and 7 males) who did not receive any training. Their mean ± SD age and BMI were 26.1 ± 2.72 years and 24.4 ± 1.04 kg/m² respectively. *Method:* Balance training was done by using Nintendo Wii Fit plus System, Balance was determined by measuring limits of stability (Reaction time, Movement velocity and Maximum excursion)by Balance Master, *Results:* Results of this study revealed that there were no statistical significant differences in the control group before and after the start of this study but there were a statistical significant differences in the study group before and after balance training .Also there were a statistical significant differences between both groups after the end of balance training in terms of reaction time, movement velocity and maximum excursion.($p < 0.05$.). *Conclusion*: It was concluded that there was a significant effect of using the Nintendo Wii Fit plus system on balance in normal subjects in terms of limits of stability (Reaction time, Movement velocity and Maximum excursion).**

Key words	**1.**	**Nintendo**
	2.	**Wii fit plus**
	3.	**virtual reality**
	4.	**Balance.**
	5.	**normal subjects**
	6.	**limits of stability**
Classification number	**:**	**000.000.**
Pagination	**:**	**107 p.**
Arabic Title Page	**:**	**تأثير نظام نينتيندو وى فت بلاس على الإ تزان فى الأشخاص الطبيعيين.**
Library register number	**:**	**4363-4364.**

Author	**:**	**Walaa Khalaf Allah Fadl Ahmed**
Title	**:**	**Pulsed Electromagnetic Field Versus Low Level Laser Therapy In Chronic Mechanical Low Back Pain**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Maher Ahmed El Kabalawy**
	2.	**Yasser El Miligui**
	3.	**Reham Hussein Diab**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Mechanical low back pain is considered as a serious health problem worldwide because it certainly can limit function and capacity in both work and personal life.Purpose: to investigate and compare the efficacy of pulsed electromagnetic field versus low level laser in management of chronic mechanical low back pain. Design : randomized controlled experimental study. Participants: Forty five patients complaining from chronic mechanical low back pain (mean age 34.02±3.251 years, height 168.64±11.989 cm, weight 66.4±11.588 kg, and BMI 23.089±1.819 kg/m²).Methods: Patients were assigned randomly into three equal groups; group (A) received pulsed electromagnetic field plus conventional treatment, group(B) received low level laser therapy plus conventional treatment and group(C) received conventional treatment only in form of infrared radiation and exercise. All patients in all groups were assessed for pain intensity using visual analogue scale, for lumbar flexion range of motion using inclinometer and for functional disability using oswestry disability index before and after four successive weeks of treatment.Results:pulsed electromagnetic field showed statistical significant improvement than low level laser therapy in increasing lumbar flexion ROM and in decreasing the functional disability in patients with chronic mechanical low back pain($p<0.05$) ,but there`s no statistical significant difference between them in decreasing pain severity in those patients($P>0.05$).Conclusion: the study revealed that both PEMF and LLLT were effective modalities for managing chronic mechanical low back pain

Key words	**1.**	**Mechanical low back pain**
	2.	**pulsed electromagnetic field**
	3.	**low level laser therapy**
Classification number	**:**	**000.000.**
Pagination	**:**	**92 p.**
Arabic Title Page	**:**	**المجال الكهرومغناطيسى المتقطع مقابل العلاج بالليزر المنخفض الشدة فى آلام أسف الظهر الميكانيكية المزمنة.**
Library register number	**:**	**4057-4058.**

Author	**:**	**Yasmin Mohammed Safwat Elkhateeb**
Title	**:**	**Efficacy of Forward Posture Correction on Endurance of Cervical Flexor and Extensor Muscles: Randomized Controlled Trial**
Dept.	**:**	**Department of Basic Science.**
Supervisors	**1.**	**Omaima Mohamed Kattabei**
	2.	**Ibrahim Moustafa Abo-Amer**
Degree	**:**	**Master.**
Year	**:**	**2015.**
Abstract	**:**	

Background: Forward head posture (FHP) is one of the most causal factors affecting endurance of cervical muscles. Purpose: This study was conducted to investigate the effect of forward head correction on endurance of cervical flexor and extensor muscles. Subjects: Thirty-eight patients aged from 15-25 years with mean (21.05 ±3.22) from both sexes randomly divided into two groups with equal numbers. Material: study group received stretching exercises for pectoral major and suboccibital muscles, and strengthening exercises for scapular retractor and deep cervical flexor muscles three sessions per week for ten weeks. Craniovertebral angle (CVA), Neck flexion endurance (NFT) and neck extension endurance (NET) were taken at two intervals pre-treatment and post-treatment. Results: There was significant difference between both groups post treatment in all variables. There was significant difference in CVA (P<0.001), NFT (P<0.001), and NET (P<0.001) for the study group, While for the control group, there was non-significant difference in CVA (P=0.492), NFT (P=0.44) and NET (P=0.084). Conclusion: FHP correction is considered as an effective factor in improving endurance of cervical flexor and extensor muscles.

Key words	**1.**	**Forward head posture**
	2.	**Craniovertebral angle**
	3.	**Neck flexion endurance test**
Classification number	**:**	**000.000.**
Pagination	**:**	**86 p.**
Arabic Title Page	**:**	**فاعلية تصحيح وضع الرأس الأمامي علي قوة تحمل عضلات الرقبة القابضة والباسطة : محاولة عشوائية محكمة.**
Library register number	**:**	**4209-4210.**