

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

**Department of Basic Science
Doctoral Degree
2018**

Author	:	Ahmed Samir Ibrahim Abdelfattah.
Title	:	Effect of selected osteopathic lymphatic techniques on immune system in healthy subjects.
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen Abdel Latif Abdel Raouf
	2.	Samy Abdul-Sammad Nasef
	3.	Rania Reffat ali
	4.	Rania Shafeek Swailm
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: The immune system has evolved to protect the host from a universe of pathogenic microbes that are themselves constantly evolving. The immune system also helps the body to eliminate toxic or allergenic substances that enter through mucosal surfaces. Osteopathic lymphatic manipulation techniques are used to enhance the immune system through the increased lymph flow and blood count changes. Purpose: This study was designed to investigate the effect of selected osteopathic lymphatic techniques on immune system in healthy subjects. Methods: Forty five healthy subjects (33 males and 12 females) participated in this study, the mean values of their age were (24.04±6.57) years, the mean values of their weight were (77.16±1.99) kilograms, the mean values of their height were (177.69±0.42) centimeters and values of their body mass index (BMI) were (24.81±0.24). They were randomly assigned into three groups by Permuted block randomization, equal in numbers, each one had 15 subjects: group (A) received sternal pump technique and sternal recoil technique. Group (B) received thoracic lymphatic pump technique (TLPT) and splenic pump technique (SPT), treatment sessions were 12 sessions, three sessions/week. Group (C) (control group) did not receive any physical therapy modality. Blood sample were taken from participants at 10 am and they were asked to fast for 12 hours before the blood sample withdrawal. Absolute count of cluster of differentiation 4 (CD4) and white blood cells (WBCs) and it's derivatives (Basophils, Neutrophils & Monocytes)and Mean corpuscular volume (MCV) counts were assessed at the beginning and after application of the treatment program. Results: Statistical analysis revealed that there was a significant increase in absolute CD4, WBCs it's derivatives (Basophils, Neutrophils, Monocytes Count) and Mean corpuscular volume (MCV) counts in the group B where the $P \leq 0.05$. While there was no significant difference for the same measuring variables in group A & C, where the $P \geq 0.05$. Comparison among the two studying group A & B revealed that there was a significant difference between group A & B in same measuring variables where the $P \leq 0.05$. Conclusion: Osteopathic manipulative techniques that consists of TLPT and SPT have an effect on enhancing the immune system in healthy subjects</p>		
Key words	1.	Osteopathy.
	2.	splenic pump technique.
	3.	Sternal pump technique.
	4.	Thoracic lymphatic pump.
	5.	Sternal recoil technique.
	6.	CD4.
	7.	immune system in healthy subjects.
	8.	healthy subjects
Classification number	:	000.000.
Pagination	:	107 p.
Arabic Title Page	:	تأثير تقنيات ليمفاوية استيوباثية مختاره على الجهاز المناعي في الاشخاص الاصحاء
Library register number	:	5945-5946.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Ayman Abdullah Mahmoud Mohamed.
Title	:	Impact of forward head posture correction on the central somatosensory conduction time
Dept.	:	Department of Basic Science.
Supervisors	1.	Neveen A. Abdel Raouf
	2.	Omaima M. A. Kattabei,
	3.	Yih-Kuen Jan
	4.	Hanan Hosny Abdel Aleem
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	<p>Background: Forward head posture causes a severe pain in the neck because it causes a muscle imbalance. This imbalance includes a shortening of deep cervical extensors and pectoralis muscle and a weakness of deep cervical flexors and shoulder retractor muscles. Due to the myodural connection presented between deep cervical extensors and dura matter of the spinal cord, an increase in the tension force placed on the spinal cord. This increases the time of central somatosensory conduction time. Thus, this study was conducted to investigate the effect of forward head posture correction on decreasing the central somatosensory conduction time.</p> <p>Methods: Thirty participants with forward head posture participated in this study. The participants were randomly distributed between two groups of exercise and control groups. The exercise group received a 30-minute forward head posture correction exercise. This exercise program was performed for 3 sessions/week for 10 weeks. The main outcome was to measure the central somatosensory conduction time and the secondary outcome was the craniovertebral angle.</p> <p>Results: The results of this study showed that the central somatosensory conduction time was significantly decreased in the exercise group ($p < 0.05$) and significantly increased in the control group ($p < 0.05$). Also, the craniovertebral angle was significantly increased in the exercise group ($p < 0.05$) and significantly decreased in the control group ($p < 0.05$). In between groups analysis, exercise group didn't significantly change over control group for either the central somatosensory conduction time nor the craniovertebral angle ($p > 0.05$).</p> <p>Conclusion: results of the current study showed that forward head correction exercise program consisting of strengthening of the weak muscles and stretching of shortened muscle significantly decreases the central somatosensory conduction time in a period of 10 weeks.</p>
Key words	1.	Central somatosensory.
	2.	forward head.
	3.	postural correction.
	4.	conduction time
Classification number	:	000.000.
Pagination	:	76 p.
Arabic Title Page	:	تأثير تصحيح الوضع الأمامي للرأس على زمن التوصيل الحسي الجسدي المركزي.
Library register number	:	6115-6116.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Dalia Samir Rushdy Ahmed.
Title	:	Effect of Whey Protein and Resisted Exercises on Anabolic Hormones in Normal Subjects.
Dept.	:	Department of Basic Science.
Supervisors	1.	Ragia Mohamed Kamel
	2.	SamyAbdElsamadNasef
	3.	Heba Mahmoud Goda
	4.	Salah El Din Basset Ahmed
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	<p>Background: Protein intake is a popular dietary strategy designed to optimize the adaptive response to exercise. The strategy involves consuming protein in and around a training sessions in an effort to facilitate muscular repair, remodelling, and thereby enhance post-exercise strength and muscle anabolism. The Purpose of the current study was to investigate the effect of whey protein and resisted exercise on anabolic and catabolic hormones regarding growth hormone, testosterone and cortisol and muscle strength in normal subjects. Materials and Methods: Sixty normal male subjects, their mean age was 18.82 ± 0.72 years, mean weight was 68.08 ± 5.36 Kg, mean height was 176.63 ± 4.61 cm and mean BMI was 21.83 ± 1.58 Kg/m² were assigned randomly into two equal groups. Data obtained from both groups 75% of the one repetition maximum before starting, after three weeks and at the end of the sixth week and blood analysis to test anabolic and catabolic hormones (testosterone, growth hormone and cortisol) were statistically analysed and compared pre with post training program. Study group received whey protein and resisted exercise. Control group received only resisted exercise. Resistance exercise was done for both upper limbs (biceps and triceps) using dumbbell according to the one repetition maximum. Three sets was done with 10 repetition for each set. The training protocol consisted of three sessions per week for six weeks for both groups. Whey protein was taken by mouth following the exercise in a dose of 1.2 g/kg/day for the study group. Results: Growth hormone and cortisol showed significant difference in the study group and control group, where P-value was 0.0001, 0.002 respectively, while testosterone showed no significant difference between both groups, where P-value was 0.166 at the end of the sixth week. One RM also showed significant difference within and between groups (study and control groups) in both muscles (biceps and triceps) where P-value was 0.0001, 0.0001 respectively in both muscles. Conclusion: Whey protein combined with resisted exercise have a positive impact on protein anabolism and muscle strength at the end of the study period. These findings suggested that whey protein with resisted exercise is more effective than using resisted exercise only.</p>
Key words	1.	Whey protein
	2.	resistance exercise
	3.	anabolic hormones
	4.	catabolic hormones.
	5.	muscle strength.
	6.	Normal Subjects.
Classification number	:	000.000.
Pagination	:	131 p.
Arabic Title Page	:	تأثير بروتين مصلى اللبن وتمارين المقاومة على هرمونات البناء في الأشخاص الطبيعيين.
Library register number	:	6009-6010.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Dina Mansour Tawfik Soliman.
Title	:	Validity and Reliability of Developed Arabic Version of Physical Therapists' Job Satisfaction Questionnaire.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida H. Elsayed
	2.	Magda Gaid Sedhom
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Job satisfaction affects the productivity and the happiness of people who perform the work. Measuring job satisfaction is vital in health professions. Job satisfaction of physical therapists in Egypt was never measured and there is no available tool to measure it. Purpose: This study was conducted to provide Arabic physical therapists with a valid and reliable Arabic physical therapists' job satisfaction questionnaire for physical therapists. Methods: <i>Subjects:</i> 280 physical therapists (30 shared in the pilot test and 250 shared in the final testing of the questionnaire) recruited from Public Hospitals, Insurance Hospitals, University Hospitals and National Educational Institutions. The Arabic version of physical therapists' job satisfaction questionnaire was constructed and tested through six steps. Procedures were: 1- Drafting, 2- Expert review, 3- First revision, 4- Pilot test, 5- Final revision, 6-Further testing of the final version of the questionnaire [1- face and 2- content validity were investigated (face and content validity based on interviews with 30 physical therapists and expert reviews). 3- internal consistency and 4- test-retest reliability were measured]. Results: the questionnaire has both 1- face and 2- content validity. 3- The intra-class correlation (ICC) for test- retest reliability was excellent (0.91). 4- The internal consistency for the questionnaire was demonstrated using Cronbach's alpha. Cronbach alpha was excellent (0.91). Conclusion: The constructed Arabic physical therapists' job satisfaction questionnaire is valid and reliable measurement for job satisfaction of physical therapists. It has face and content validity. It also has excellent test re-test reliability and internal consistency</p>		
Key words	1.	job satisfaction.
	2.	questionnaire
	3.	performance.
	4.	Physical Therapists' Job Satisfaction Questionnaire.
Classification number	:	000.000.
Pagination	:	77 p.
Arabic Title Page	:	اختبار صلاحية ومصداقية النسخة العربية الم نشأة لإستبيان الرضا الوظيفي لأخصائي العلاج الطبيعي.
Library register number	:	6023-6024.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Mariam Omran Attyiat Gras
Title	:	Influence of anthropometric measures on mechanical neck pain
Dept.	:	Department of Basic Science.
Supervisors	1.	Haytham M Elhafez
	2.	Sohair Shehata
	3.	Manar H Abdel Satar
	4.	Olfat Ibrahim Ali
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Mechanical neck pain (MNP) is common musculoskeletal disorder; that has been repeatedly shown to correlate with sedentary life as well as our dependence on technology in work place. Objective: was to evaluate the anthropometric measures, 3 cervical angles and root mean square (RMS) of cervical muscles in MNP as well as asymptomatic individuals. Methods: A total of 77 participants their ages ranged from 18 to 23 years were recruited in this study, including; 43 subjects complaining of MNP and, 34 asymptomatic subjects. Outcome measures included anthropometric measures(head depth, head width, head circumference, neck length, neck girth, neck circumference, biacromial width, rounded right and left shoulder) measured via anthropometer, tape measurement and ruler. Also, 3 cervical angles (Oc-C₂, C₁-C₂, and C₂-C₇) measured via digital x-ray imaging. Additionally, electrical activity of the upper trapezius (UT), cervical erector spinae (CE), sternocleidomastoid (SCM) and anterior scalene (AS) muscles was recorded by EMG device. Results: There were significant differences between MNP and asymptomatic groups with respect to the C₂-C₇ angle ($P=0.000$) and RMS activity for the right and left UT ($P=0.007$) and left SCM ($P=0.012$). However, no significant differences between these two groups of participants were found for the anthropometric measures, Oc-C₂ and C₁-C₂ ($p=0.0862$ and $p=0.941$, respectively). Pearson correlation analysis 'revealed that the Oc-C₂ angle had inverse correlation with neck length ($P=0.027$, $r=-0.378$) for asymptomatic group, while there was direct correlation between C₂-C₇ and neck girth, right rounded shoulder, left rounded shoulder and biacromial width ($P=0.030$, 0.004, 0.026, 0.022, $r=0.331$, 0.432, 0.339, 0.349, respectively) for MNP participants. Conclusion: Relative to asymptomatic individuals, MNP individuals had reduced cervical lordosis and greater activity of UT and SCM muscles. Moreover, the anthropometric measures were related to cervical angles.</p>		
Key words	1.	Anthropometric measures.
	2.	Cervical spine.
	3.	Electromyography.
	4.	Chronic mechanical neck pain
Classification number	:	000.000.
Pagination	:	185 p.
Arabic Title Page	:	تأثير قياسات الجسم البشري على ألم الرقبة الميكانيكي.
Library register number	:	5935-5936.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Marwa Mahmoud Mahfouz Mahmoud
Title	:	Effect of Aquatic Versus Conventional Therapy in Treatment of Chronic Low Back Pain
Dept.	:	Department of Basic Science.
Supervisors	1.	Ragia Mohamed Kamel
	2.	Ahmed Hassan Yosry
	3.	Magda Gaid Sedhom
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Chronic Low Back Pain (CLBP) is one of the most common problem of back dysfunction. The recent literatures recorded that up to 90% of the world's population suffer from low back pain at some point in their life which cause of disability in people and represents social and economic problems in most countries. Purpose: To compare between the effect of aquatic and conventional therapy on pain level, functional disability and Lumbar Range of Motion (ROM) in subjects with CLBP. Subjects: Forty subjects (22 males and 18 females) were diagnosed as CLBP, their age ranges from 30 to 50 years randomly assigned into 2 groups. Subjects in Control Group (A) (n=20) mean \pm SD age (39.2 \pm 3.42) ys, weight (82.15\pm6.13) kg, height (172.45\pm4.59) cm, and Body Mass Index (27.6 \pm 1.47) kg/m² they received conventional therapy (infrared, ultrasonic, interferential, and therapeutic exercises). Subjects in Experimental Group (B) (n= 20) mean \pm SD age (40.45\pm3.66) ys, weight (81.25\pm8.67) kg, height (172.15\pm6.22) cm, and Body Mass Index (27.34 \pm 1.55) kg/m² they received aquatic therapy in 3 phases (warm up, progressive aquatic exercises, and cool down) the duration of intervention was given for 3 days/week for 6 weeks. Outcome measurements such as pain using Visual analogue scale (VAS), functional disabilities using Oswestry Disability Index Questionnaire (ODI) and lumbar ROM using Inclinometer were measured before and after intervention. Results: There was statistically significant improvement in values of post-treatment in both groups compared with pre-treatment in pain percent of improvement for group A was 54.86% and 57.74% for group B (P< 0.0001), functional disability percent of improvement for group A was 55.46% and 58.95% for group B (P< 0.0001), And improving lumbar ROM, for group A was 46.63%, 18.79%, 20.98%, 22.17% (P< 0.0001) for lumbar flexion, extension, Right, and Left side bending respectively, and for group B was 46.96%, 22.85%, 20.18%, 23.31% (P< 0.0001). Conclusion: It is concluded that both aquatic and conventional therapy have similar effect on reducing pain severity, functional disability, and improving lumbar ROM in chronic low back pain patients.</p>		
Key words	1.	Chronic Low Back Pain.
	2.	Inclinometer.
	3.	Functional disability.
	4.	Aquatic
	5.	Conventional
	6.	Exercises.
	7.	VAS.
Classification number	:	000.000.
Pagination	:	154 p.
Arabic Title Page	:	تأثير العلاج المائي مقابل العلاج التقليدي في علاج آلام أسفل الظهر المزمنة.
Library register number	:	5813-5814.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Marwa Taher Mohamed
Title	:	The Effect Of Exercise Program In type 1 Diabetic Patients After Autologous Bone Marrow Stem Cell Transplantation
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatef Labib
	2.	Mohammed Mohammed El Husseiny
	3.	EmanAbd El Moeiz
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Stem cell therapy is a promising approach for the treatment of type 1 diabetes mellitus (T1D). Previous studies recommended regular exercise for the control of (T1D). Experimental studies showed that a combination of stem cells and exercise yield a better outcome. Purpose: The current study aimed to examine the effect of a combined exercise program on measures of glycemic control in patients with T1D who received autologous bone marrow stem cell transplantation (ABMSCT). Methodology: Thirty patients with controlled T1D were assigned into two equal groups exercise group (A) and control group (B). Both groups underwent ABMSCT and received insulin therapy and a diabetic diet regime. Only the group (A) followed the combined (aerobic and resistive) exercise program. Outcome measures of glycemic control (fasting blood glucose level (FBG), postprandial blood glucose level (PPG), HbA1c, daily insulin dosage and C-peptide levels) were tested before and after three month rehabilitation period. Results: There were significant ($p<0.05$) decreases in all outcome measures except C-peptides after ABMSCT compared with before in both groups. Moreover, there was a significant decrease in the mean value of HbA1c in the exercise group compared with the control group after rehabilitation. Conclusion: Performing a combined exercise program after ABMSCT in patients with T1D for 3 months can improve HbA1c in those patients; however, it has no effect on C-peptide values.</p>		
Key words	1.	Type 1 diabetes mellitus.
	2.	Autologous Bone Marrow Stem Cell Transplantation
	3.	combined exercise
	4.	glycemic control.
Classification number	:	000.000.
Pagination	:	100 p.
Arabic Title Page	:	تأثير برنامج التمرينات على مرضى السكر من النوع الاول بعد زرع الخلايا الجذعية الذاتية.
Library register number	:	5837-5838.

**ELECTRONIC GUIDE TO THESES APPROVED BY
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Author	:	Mohamed Yahia Gamal Eldin.
Title	:	Effect of Lateral Wedged Foot Insole on Knee Proprioception in Knee Osteoarthritis.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida H. EL Sayed
	2.	Hassan H. Ahmed
	3.	Ghada A. Abdullah
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Osteoarthritis (OA) is a degenerative joint disease, characterized by joint pain, stiffness and disability. Proprioception declines with articular disease such as OA. It may affect the correct perception of the knee joint position and movement. The purpose: To investigate the effect of lateral wedged foot insole (LWI) on pain intensity level, physical function disability level and proprioception accuracy level of knee in medial knee osteoarthritis (MKOA). Subjects: Thirty patients were randomly assigned into 2 equal groups participated in the study. Group A with mean age of 46.57 ± 6.04 years, mean weight 83.92 ± 5.07 kg, mean height 160.42 ± 2.84 cm and mean body mass index (BMI) 31.28 ± 2.84 kg/m². Group B with mean age of 47.54 ± 9.39 years, mean weight 82.9 ± 10.27 Kg, mean height 165.36 ± 7.01 cm and mean BMI 30 ± 5.11 Kg/m². Method: Measurements were conducted pre, during treatment; post one month of commencement of the treatment and immediately post three months of commencement of the treatment in each group. Group A received conventional treatment program for three months and group B received the same and using 5° LWI. Results: In group B, There were significant improvement in all three variables (proprioception accuracy, pain and physical function) immediately post three months of treatment and between groups. Also, there were significant improvement of pain and physical functions during treatment; post one month of the treatment and between (during treatment; post one month and immediately post three months of the treatment). On the other hand, there were significant improvement of pain and Physical function during treatment; post one month and immediately post three months of the treatment but, there were no significant improvement between post one month and immediately post three months of the treatment in group A. Also, there were no significant improvement immediately post three months in proprioception accuracy measurements. Conclusion: Using the LWI together with the conventional treatment program were more beneficial in treatment of MKOA than using the conventional treatment program only.</p>		
Key words	1.	Laterally wedged insoles
	2.	knee osteoarthritis.
	3.	Knee Proprioception.
	4.	Proprioception.
Classification number	:	000.000.
Pagination	:	143 p.
Arabic Title Page	:	تأثير النعل الداخلى ذى الأسفين الخارجى على استقبال الحس العميق للركبه فى حالات خشونة الركبه.
Library register number	:	6193-6194.

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

Author	:	Rehab El-Saeed El-Sherbeeney.
Title	:	Effect of low level laser therapy in treatment of temporomandibular joint dysfunction.
Dept.	:	Department of Basic Science.
Supervisors	1.	Wadida H. ElSayed,
	2.	Essam M. Ashour
	3.	Rania Reffat Ali,
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Temporomandibular Joint Dysfunctions (TMJDs) are considered the most common chronic orofacial pain condition characterized by pain in the Temporomandibular Joint (TMJ) area, masticatory muscles and associated musculoskeletal structures with the affection of mouth opening. Conventional therapy and Low-Level Laser Therapy (LLLT) are safe and non-invasive modalities that each therapist focuses on to relieve pain, increase function and quality of life. Purpose: it was to investigate the effect of LLLT on pain level, limitations of daily functions and quality of life in patients with bilateral (TMJD). Methods: 90 patients (68 females and 22 males) with bilateral TMJD divided in to two different Studies, Study I:60 patients (44 females and 16 males) with myofascial pain syndrome of TMJ and study II: 30 patients (24 females and 6 males) with osteoarthritis TMJ each was divided randomly into study and control groups. Study group in both studies received conventional therapy consisting of active and stretching exercises for mandibular muscles with ultrasound and LLLT application on TMJ area. While control group received conventional therapy, only in both studies treatment duration for both study was 6 weeks, 3 sessions per week. Pressure pain threshold was evaluated using hand held pressure algometer and pain-related limitations in daily functions , quality of life were evaluated by the limitations in daily functions-temporomandibular disorders questionnaire (LDF-TMDQ) and (WHOQOL-Brief) at baseline and after 6 weeks of the treatment. Results: There was a significant decrease ($p<0.05$) in limitations in daily functions, with a significant increase ($p<0.05$) in the quality of life and a significant increase ($p<0.05$) in pressure pain threshold for TMJ, masseter and anterior temporalis muscles at both sides in study groups compared with control groups. Conclusion: LLLT as well as combination of conventional therapy improvement was more effective in pain level to relief and improvement of limitations in daily functions impairment and quality of life than the conventional therapy alone in patients with bilateral TMJD.</p>		
Key words	1.	Temporomandibular joint.
	2.	Low-level laser therapy.
	3.	Conventional therapy.
Classification number	:	000.000.
Pagination	:	145 p.
Arabic Title Page	:	تأثير الليزر منخفض المستوى في علاج الإختلال الوظيفي في المفصل الصدغي الفكي.
Library register number	:	5997-5998.

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

Author	:	Roshdy Mohamed Kamel Moustafa
Title	:	Effect of Transcranial Laser on Pain and Somatosensory Integration in Patients with Nonspecific Neck Pain
Dept.	:	Department of Basic Science.
Supervisors	1.	Ragia Mohamed Kamel
	2.	Ibrahim Moustafa Abu Amer
	3.	Ghada Ismail Mohamed
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Design of the study: The study was designed as prospective, randomized, sham (placebo), and controlled trial. Materials and Methods: Thirty two male subjects suffering from non-specific neck pain were participated in the current study. They were randomly assigned via a balanced stratified assignment. The experimental group (N=16), the mean \pm standard deviation of age (25.13\pm3.1) years, weight (63.88\pm7.26) kilograms, height (169.63\pm7.6) centimeter, received transcranial infrared laser (50 mW, 905 nm. pulsed operating mode, pulse frequency 1000 Hz, pulse duration 100 nsec, and 1.2 J/cm²) over sensory cortex. The control group (N=16), the mean \pm standard deviation of age (26.88\pm1.63) years, weight (70.13\pm7.86) kilograms, height (174.13\pm8.2) centimeter, received placebo laser. The assessment of N30 and P22-N30 components of somatosensory evoked potentials (SEPs) were done before and immediately after treatment session for both groups. Results: There was a statistical significant difference between groups regarding N30 peak of SEPs after a single trans-cranial laser session (P<0.0063) with no significant difference between pre and post treatment data in experimental group (P<0.081) and control group (P>0.56) with a percentage of change (2.38%) and (1.009%) respectively. In addition, post treatment results revealed no statistical significant difference between groups regarding P22-N30 component of SEPs (P>0.09) and pain (P>0.88). Conclusion: according to the parameters used in the study, it was concluded that trans-cranial laser had no effect on somatosensory integration in patients with nonspecific neck pain</p>		
Key words	1.	Transcranial.
	2.	Integration.
	3.	Neck.
	4.	pain.
	5.	Laser.
	6.	Nonspecific Neck Pain
	7.	Somatosensory.
Classification number	:	000.000.
Pagination	:	151 p.
Arabic Title Page	:	تأثير الليزر عبر الجمجمة علي الألم و التكامل الحسي الجسدي في المرضى ذوي آلام الرقبة غير المحددة.
Library register number	:	5815-5816.

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

Author	:	Saied Mohamed Ibrahim Abdel Mageed
Title	:	The effect of cervical lordosis rehabilitation on disability, pain and vertebral artery blood flow in non – specific neck pain
Dept.	:	Department of Basic Science.
Supervisors	1.	Awatif Mohamed labib
	2.	AlaaMohyEldinSoliman
	3.	EnasElsayed Mohammed Abutaleb
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Neck pain is an important condition, social and economic health problem, affecting up to two thirds of adults at some point in their lives. The purpose: To determine the effect of correction of cervical lordosis using a denneroll on disability, vertebral artery blood flow, pain and restoration of normal sagittal cervical curve alignment. Subjects: Sixty patients (38 females and 22 males) with non – specific neck pain were assigned randomly into two equal groups group (A) as an experimental and (B) as a control group with age ranged from 25-45 years. Methods: Measurements included functional neck disability, pain intensity, cervical curve lordosis and vertebral artery blood flow outcome measurements. The study groups (A) received traditional physical therapy program in addition to cervical denneroll equipment respectively while control group (B) received traditional physical therapy program only. The frequency of treatment was 3 times / week for 8 weeks with total sessions of 24 sessions. Results: The results revealed that there were a significant improvement of all measured parameters in group (A) ($P < 0.05$) while there were no significant improvement of all measured parameters in group (B) ($P > 0.05$) when comparing between groups. Conclusion: cervical denneroll equipment is an important factor to be considered in management of cervical lordosis in cases of non – specific neck pain.</p>		
Key words	1.	Neck pain
	2.	Cervical lordosis rehabilitation.
	3.	Blood flow
	4.	Denneroll
	5.	Disability.
	6.	Pain.
	7.	vertebral artery blood flow
	8.	non – specific neck pain
Classification number	:	000.000.
Pagination	:	112 p.
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Library register number	:	5895-5896.

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

Author	:	Wael Osama Aly Abd El-Khalek
Title	:	Validity And Reliability Of Laser Goniometer In Measuring Range Of Motion In Healthy Subjects
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohamed Hussein El-Gendy
Degree	:	Doctoral.
Year	:	2018.
Abstract	:	
<p>Background: Methods of objective assessment of range of motion are limited, one of the best but expensive standardized methods is the electro-goniometer, and one of the new methods that arises recently is the laser goniometer. Purpose: The purpose of this study was: 1) to investigate the concurrent validity of the laser goniometer via correlating and comparing its repeated measures with those of electro-goniometer considering the electro-goniometer as the reference standard. 2) to investigate the intra-rater reliability of the laser goniometer through measuring the degree of consistency of its readings on repeated measures. Subjects: participants in this study were one hundred healthy male students and colleagues at Misr University for Science and Technology. Their ages ranged between 20-30 years. Methods: Average of three consecutive measures was taken by the same examiner for the active range of motion of cervical, shoulder and knee bilaterally for each subject by each of the laser and electro-goniometers, keeping the standardization of measurement procedures, subjects' positions and stabilizations constant all over the measurement period. Research design: A one group within-subject test research design was used in this study. Results: 1) Pearson correlation coefficient (r) and paired T-test had been used to investigate the concurrent validity of the laser goniometer. The results of correlation coefficient values showed moderate relation for cervical flexion and strong relation for all other cervical motions, and very strong relation for bilateral shoulder flexion, external and internal rotation and right knee flexion motions, and excellent relation for bilateral shoulder abduction and left knee flexion movements. Also there was no significant difference between measures obtained by both devices for all movements except for cervical flexion which showed that the laser goniometer provided significantly higher readings than those of the electro-goniometer. 2) Intra-class Correlation Coefficient (ICC) had been used to investigate the intra-rater reliability of the laser goniometer and the results revealed that the laser goniometer has proved very high reliability values. Conclusion: laser goniometer can be used interchangeably with the electro-goniometer as a new valid and reliable digital objective alternative method of measuring cervical, shoulder, and knee range of motion, except for cervical flexion movement which showed moderate correlation and significant difference between readings of both devices.</p>		
Key words	1.	Laser Goniometer,
	2.	Range of Motion Assessment.
	3.	Validity.
	4.	Reliability.
	5.	Cervical.
	6.	Electro-Goniometer
	7.	Healthy Subjects in Range of Motion
	8.	Shoulder.
	9.	Knee.
	10.	Objective Method.
Classification number	:	000.000.
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