

## Department of Basic Science

### Doctoral Degree 2009

<b>Author</b>	:	<b>Amir Nazih Wadee Mawad.</b>
<b>Title</b>	:	<b>Influence of low level laser therapy on delayed muscle soreness after eccentric exercise and neuromuscular electrical stimulation.</b>
<b>Dept.</b>	:	<b>Department of Basic Science.</b>
<b>Supervisors</b>	1.	<b>Fatma Seddek Amin.</b>
	2.	<b>Maher Ahmed El-Keblawy.</b>
	3.	<b>Fawzy Ahmed Halawa.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2009.</b>
<b>Abstract</b>	:	
<p><b>Objective:</b> The current study was conducted to investigate the influence of laser on delayed muscle soreness after eccentric exercise or neuromuscular electrical stimulation. <b>Methodology:</b> Ninety volunteers (mean age <math>18.92 \pm 1.5</math>) were randomly assigned into three equal groups. Group I performed eccentric exercise, group II received electrical stimulation, and group III control group. Laser was conducted by 7 Joules for 10 minutes on dominant quadriceps muscle in group I and group II while sham laser was conducted to group III. The maximum voluntary contraction (MVC), pain, and Creatin phosphokinase (CK) were evaluated pre, post immediately and after 48 hours. <b>Results:</b> there were insignificant changes in group I (MVC decreased 3.5%, Pain increased 4.87%, and CK increased 1.55%) while in group II (0.68%, 7.96%, 4.76%). Highly significant changes were noticed in group III, the control group for group I (MVC decreased 18.74%, Pain increased 35.21%, and CK increased 59.72%) while in the control group for group II were (19.36%, 47.74%, 54.91% ) respectively. <b>Conclusion:</b> laser could attenuate muscle soreness following eccentric exercise and electric stimulation.</p>		
<b>Key words</b>	1.	<b>Low Level Laser Therapy.</b>
	2.	<b>Delayed Muscle Soreness.</b>
	3.	<b>Eccentric Exercise.</b>
	4.	<b>Neuromuscular Electrical Stimulation.</b>
<b>Arabic Title Page</b>	:	<b>كفاءة الليزر منخفض الشده على التعب العضلي المتأخر الناتج عن التمرينات السالبة الأتجاه والتنبيه العصبي العضلي.</b>
<b>Library register number</b>	:	<b>1981-1982.</b>

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

Author	:	Amira Hussin Mohamed Draz.
Title	:	Effect of plyometric training on shoulder proprioception in athletic subjects.
Dept.	:	Department of Basic Science.
Supervisors	1.	Fatma Sedek Amin.
	2.	Mohamed hussein El Gendi.
	3.	Ragia Mohamed kamel.
Degree	:	Doctoral.
Year	:	2009.
Abstract	:	<p><b>Purpose:</b> The purpose of the study was to investigate the effect of the plyometric training program on shoulder proprioception in healthy upper extremity athletes. <b>Materials and methods:</b> Fifty players were included at the starting of the study, They were divided into two groups; Group A (Experimental) which consisted of 25 players with mean value of age were <math>14.84 \pm 0.68</math> years, mean values of body weight were <math>69.4 \pm 6.72</math> Kg, mean value of height were <math>171.72 \pm 7.94</math> cm, mean value of body mass index(BMI) were <math>23.56 \pm 2.07</math> Kg/m<sup>2</sup>, and actively participated in the suggested plyometric training program in addition to their training program. Group B (Control) which consisted of 25 players With mean value of age were <math>15.08 \pm 1.07</math> years, The mean value of body weight were <math>70.16 \pm 5.03</math> Kg, the mean value of height were <math>173.16 \pm 4.78</math> cm, the mean value of body mass index(BMI) were <math>23.39 \pm 1.31</math> Kg/m<sup>2</sup>.and actively participated in the traditional training program of their team. Measurement of their proprioception accuracy repositioning (active and passive tests) was conducted before and after the training period by using the Biodex Medical System III. Both groups were trained for successive six weeks in the preparatory period. <b>Results:</b> There was a significant difference due to the effect of plyometric training on proprioception accuracy level . <b>Conclusion:</b> there is an effect of plyometric training on shoulder proprioception in upper extremity athletes.</p>
Key words	1.	Shoulder joint.
	2.	Proprioception.
	3.	Plyometric training.
Arabic Title Page	:	تأثير التدريبات متعددة القياسات على المستقبلات الحسية العميقة لمفصل الكتف في الأشخاص الرياضيين.
<b>Library register number</b>	:	<b>1925-1926.</b>

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

Author	:	Amr Abd El Samad Abd El Monem.
Title	:	Effect of modified aerobic exercise program and personality on plasma leptin level in abdominal obese subjects.
Dept.	:	Department of Basic Science.
Supervisors	1.	Mohsen El Sayyad.
	2.	Awatif Labib.
	3.	Fawzy Halawa.
Degree	:	Doctoral.
Year	:	2009.
Abstract	:	<p>Leptin is a hormone secreted by adipose tissue cells to regulate body weight The presence of excess fat in the abdomen, out of proportion to total body fat, is an independent predictor of risk factors and morbidity Many studies have been directed towards examining the effects of aerobic activity on serum Leptin utilizing continuous running regimens. <b>The purpose:</b> of this study was to investigate the effects modified aerobic exercise and personality on plasma Leptin level in abdominal obese subjects. <b>Subjects:</b> sixty healthy 4 male and 56 female subjects with mean age (29.95 ± 6.84) years, weight (101.7 ± 12.45) Kg and height (163.52 ± 6.49)cm assigned randomly to three equal groups. <b>Methods:</b> plasma Leptin level, weight, abdominal circumference and BMI were measured pre-treatment and twelve weeks post-treatment. The independent variable was the modified aerobic exercise and personality. Three groups were included 2 study groups (Group I slow aerobic exercise group, Group II fast aerobic exercise group) and control group. One way analysis of variance (ANOVA) was used to determine significant differences in data between and among the groups. <b>Results:</b> The effect of diet and slow aerobic exercise program decrease plasma Leptin level more than the effect of diet and fast aerobic exercise program in abdominal obese subjects.2- The effect of personality as in going and out going on behavior of subjects during the study in relation to variables Weight, BMI, Abdominal circumference, and Leptin their were no effect of personality. <b>Discussion and conclusion:</b> Diet and the modified aerobic exercise (especially slow aerobic exercise program) decrease plasma Leptin level more than the effect of diet and fast aerobic exercise program in abdominal obese subjects. Also the effect of personality as in going and out going on behavior of subjects during the study in relation to variables has minimal effect but not significant.</p>
Key words	1.	Aerobic exercise.
	2.	plasma Leptin level.
	3.	obesity.
	4.	BMI.
Arabic Title Page	:	تأثير برنامج التمرينات الهوائية المعدل والشخصية على مستوى اللبتين فى الدم لدى الأشخاص البدناء.
<b>Library register number</b>	:	<b>1987-1988.</b>

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PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

<b>Author</b>	:	Amr Saad Eldeen Mohamed Shalaby.
<b>Title</b>	:	Validity and reliability of modified median-to-ulnar sensory nerve action potential ratio test.
<b>Dept.</b>	:	Department of Basic Science.
<b>Supervisors</b>	1.	Omaima Mohamed Ali Kattabei.
	2.	Fatma Sedeek Amin.
	3.	Amal Fawzy Ahmed.
<b>Degree</b>	:	Doctoral.
<b>Year</b>	:	2009.
<b>Abstract</b>	:	
<p><b>Background:</b> Electrodiagnosis is a multitude of tests that are used to confirm different peripheral neuropathic lesions. Carpal tunnel syndrome (CTS) is the most common troublesome syndrome that requires electrodiagnostic referral. Several electrodiagnostic tests have been proposed with wide range of sensitivity and specificity. The Median-to-Ulnar Sensory Nerve Action Potential Ratio test (MUSNAP) is one of these tests that has been shown to have low sensitivity to CTS. The purposes of the study: 1) to determine normal values of the modified MUSNAP ratio test concerning all median digital branches versus all ulnar digital branches, 2) Determine correlation between modified MUSNAP ratio test and the Median-to-Ulnar Sensory Latency Difference test (MU SLD) and 3) Calculate the specificity of the modified MUSNAP ratio test. <b>Materials and Methods:</b> 53 apparently healthy subjects were recruited in this study with mean age of <math>19.26 \pm 1.38</math> years. A TOENNIES neuroscreen plus system was used for application of the modified MUSNAP ratio test. <b>Results:</b> the Median-to-Ulnar Sensory Nerve Action Potential (MUSNAP) ratios were; M1/U4= 2.12, M2/U4= 2.17, M3/U4= 2.29, M4/U4= 1.59, M1/U5= 1.46, M2/U5= 1.48, M3/U5= 1.63 and M4/U5= 1.08. The 5<sup>th</sup> to 95<sup>th</sup> percentile range was 0.56-4.00. Comparing dominant values with the non-dominant values showed that there were no significant difference between latencies and MUSNAP ratios of dominant and non-dominant hands. There were no significant differences between amplitudes of both hands except for the third digit which showed significant difference between both hands. The modified MUSNAP ratio test had poor correlation with the MU SLD test. Specificity of the MUSNAP ratio test was 95.52%. <b>Conclusion:</b> it is concluded that: 1) The validity of the modified MUSNAP ratio test is not high enough to be used as diagnostic test for CTS, 2) The amplitude of the SNAP is the first parameter affected in excessive functional hand use, 3) Amplitudes of the fourth digit (both median and ulnar) are to be excluded from MUSNAP ratios calculations, as the median-to-ulnar sensory representation ratio of the fourth digit is not the same for all subjects and exclusive supply of this digit by either nerve is not uncommon and 4) The modified MUSNAP was 95.52% specific which considered as accepted level of specificity to rule out the presence of nerve compression in normal subjects.</p>		
<b>Key words</b>	1.	Carpal tunnel syndrome.
	2.	modified median-to-ulnar sensory nerve.
<b>Arabic Title Page</b>	:	الصلاحية و المصادقية في إستخدام الجهد الفعال المعدل للعصب الأوسط والزندى كإختبار نسبي.
<b>Library register number</b>	:	2003-2004.

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<b>Author</b>	:	<b>Dalia Mohamed Mohamed Mosaad.</b>
<b>Title</b>	:	<b>Influence of school bag carriage on gait and posture.</b>
<b>Dept.</b>	:	<b>Department of Basic Science.</b>
<b>Supervisors</b>	1.	<b>Mohsen El Siead.</b>
	2.	<b>Samy Abel Samad.</b>
	3.	<b>Sahar Mohamed Adel.</b>
<b>Degree</b>	:	<b>Doctoral.</b>
<b>Year</b>	:	<b>2009.</b>
<b>Abstract</b>	:	
<p><b>This study investigated the effect of the ordinary backpack and the double bag style on the neck posture and kinetic measures of the children. Thirty subjects passed by two tests. Static test while child stands. Second, the dynamic test, to take GRF. There was a statistically significant increase in the cranio - vertebral angle. There was significant increase in all GRF when carrying the ordinary bag in relation to no load.</b></p>		
<b>Key words</b>	1.	<b>Backpack.</b>
	2.	<b>Children.</b>
	3.	<b>Neck posture.</b>
	4.	<b>Ground reaction force.</b>
<b>Arabic Title Page</b>	:	<b>تأثير حمل حقيبة المدرسة على المشية وقوام الجسم.</b>
<b>Library register number</b>	:	<b>1923-1924.</b>

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