Publications Template

#	Research Title	Field	Abstract	Year of Publication Publishing	Publishing Link "URL"
1	Combined low-intensity laser therapy and hyperbaric oxygen therapy on healing of chronic diabetic foot ulcers: a controlled randomized trial	Basic Sciences in Physical therapy	Purpose: This investigation was conducted to evaluate the effectiveness of low-level laser therapy (LLLT) photo-bio modulation (PBM) and hyperbaric oxygen therapy (HBOT) on healing of prolonged diabetic foot ulcers.Patients and Methods: One hundred patients with chronic diabetic foot ulcers (DFU); their ages ranged from40-65 years. The patients were assigned randomly into four groups. Control group received conventionalwound care only, LLLT group received GaAlAs diode laser, its power output was1440 mW with following wavelengths: 5 x 850 nm 200 mW, 12 x 670 nm 10mW, 8 x 880 nm 25 mW, 8 x 950nm 15mW and energy density(flounce) was adjusted for 4 J/cm2 with pulse frequency of 10 KHZ, each session lasted 8 minutes for 3 times perweek day after day. HBOT group received 100%pure oxygen under 2.5 ATA delivered for 60 minutes per sessionfor 30 sessions with 5 sessions per week for6 successive weeks. Combined group received combination of bothLLLT and HBOT. All groups received standard wound care in addition to their program. Measurements for ulcersurface area (USA) by transparent method and ulcer volume (UV) by volumetric method were performed beforestarting the study, in the second, fourth- and sixth-weeks post treatment.Results: MANOVA test revealed that there was statistically significant reduction in USA and UV in the LLLT,HBOT and Combined groups (P-value= 001 and 0.0001 in all groups respectively). Regarding USA, there were nsignificant differences among groups in the second, fourth, and sixth weeks(P-value= 0.01 for all measurements). Regarding ulcer volume, there weresubstantial variations post- 2, 4, and 6-weeks tests (P-value= 0.01, 0.0001,and 0.0001 respectively). Multiple comparison in-between groups showedinsignificant differences in-between the experimental groups.Conclusion: The combination therapy between LLLT does not accelerate thehealing rate in chronic DFU more than and	2024	https://www.researchgate.net/publication/378769518

			LLLT or HBOT alone.Keywords: low-level laser therapy, Photo bio modulation, Hyperbaric oxygentherapy, Diabetic chronic ulcers.		
2	Effects of different aerobic exercise protocols on regional body fatness and serum lipids in women with obesity: a randomized trial	Basic Sciences in Physical therapy	Aim. This study aimed to compare the effects of high-volume high-intensity interval training (HV-HIIT), low-volume high-intensity interval training (LV-HIIT), and moderate-intensity continuous training (MICT) on regional body fatness and serum lipids in adult obese women. Methods. Forty-six women with obesity and dyslipidemia completed this study. They were randomly allocated to HV-HIIT protocol (n = 15), LV-HIIT protocol (n = 14), and MICT protocol (n = 17). The protocols were performed three days a week for eight weeks. Measurements included body mass index (BMI), waist circumference (WC), sub-total fat, leg fat, trunk fat, arm fat, lean mass, fat-free mass, and bone mineral content via DXA, self-paced maximal cycle test for HRmax determination, and serum lipids (TC, HDL, LDL, TG). Results. HV-HIIT led to significantly greater improvements in HRmax, body fat measures, TC, and HDL compared to the other protocols ($p < 0.05$). Both LV-HIIT and MICT were effective in reducing TC, but LV-HIIT showed better results for improving HDL ($p < 0.05$). Conclusion. HV-HIIT was the most effective for reducing body fat and improving TC and HDL, while LV-HIIT was superior to MICT in improving HDL.	2024	DOI: https://doi.org/10.56984/8ZG020AYN5

3	Influence of postural stability training versus neck stabilization exersices on balance in patients with forward head posture	Basic Sciences in Physical therapy	Introduction Research has confirmed that adopting a forward head position (FHP) can cause a displacement of the body's center of gravity, causing the upper body to lean backward. This can create a significant ergonomic hazard, increasing the likelihood of sustaining injuries. Due to compensatory upper body drift, both hips usually tilt forward. As a result, FHP can not only lead to neck pain but also create back pain and disrupt balance. Aim of study the purpose of study was to find out the impact of biodex postural stability training versus stabilization head and neck exercise balance in individuals with forward head posture. Methods This study involved 60 young adults with severe forward head posture (<46 cranio-vertebral angle) Subjects were divided into 3 groups (A , B and C). Group A were given conventional treatment plus postural stability training using biodex balance system for six weeks, day after day. Group B were given conventional treatment plus neck stabilization exercise for six weeks, day after day. Group C were given conventional treatment plus combination between postural stability training and neck stabilization exercise. Results comparison between the three groups reveled the findings of these study revealed that the superiority of group A on group B in both APS, MLS, and, while, there was superiority of group B on group A in CVA. In addition, there were superiority of group C on group A in OS, MLS, CVA, and ROF. Furthermore, there was superiority of group C on group B in all variables except CVA Conclusions According to the extent and results of the study, it was determined that stability exercise in addition to conventional treatment were more effective in improving biodex measurement , CVA measurements , OS, MLS, APS, and ROF .	2024	Medical journal of Cairo Univ.

			Key words Mechanical neck pain; Exercise; posture stability, biodex , CVA		
4	Influence of Cardiorespiratory Fitness on Walking Performance in Chronic Hemiplegic Patients with Myocardial Infarction	Basic Sciences in Physical therapy	Background: Concurrence of chronic ischemic stroke with myocardial infarction is serious in clinical scenarios. The purpose: was to determine the influence of cardiorespiratory fitness (CRF) on walking performance in chronic hemiplegic patients with myocardial infarction. Methodology: Forty chronic hemiplegic patients (more than 6 months) with myocardial infarction, of both genders, aged from 40 to 50 years. Patients were assigned into two groups: study group (A): received the CRF (treadmill training for 5 minutes before and after calisthenic exercise which was performed for 25 minutes) in addition to the traditional physical therapy program for 25 minutes (relaxation technique, facilitatory technique, stretching exercise, proprioceptive neuromuscular facilitation and trunk control training; 5 minutes for each exercise), and control group (B): received the traditional physical therapy program only for 60 minutes (12 minutes for each exercise). The treatment session for each group was 60 minutes, three times per week for 12 weeks. Patients were assessed pre-and post-12 weeks treatment through the stress exercise test (modified Bruce protocol) and the 10-meters walking tests. The exercise intensity ranged from 50% to 80% Maximum heart rate. Results: The in-between comparisons showed significant decrease in resting heart rate, maximum heart rate, maximum systolic blood pressure, and maximum diastolic blood picture (P-value= 0.0001, 0.008, 0.002, and 0.006 respectively) and significant increase in metabolic equivalent, maximum oxygen consumption, and 10-meters walking test (P-value= 0.001, 0.031, and 0.001 respectively) in favor of group (A). Conclusion: The CRF improved walking performance in chronic hemiplegic patients with myocardial infarction.	2022	DOI: 10.31838/ijpr/2021.13.02.051
5	Maze Control Training on Kinesthetic Awareness in Patients with Stroke: A	Basic Sciences in Physical therapy	**Objective:** To determine the influence of adding maze control training to the selected conventional physical therapy on kinesthetic awareness in patients with chronic stroke. **Methods:** Thirty adult patients of both genders with chronic cerebral stroke were assigned to control and experimental groups randomly: the control group (A) received	2022	DOI: 10.1155/2022/5063492

	Randomized Controlled Trial.		the selected conventional physical therapy rehabilitation program, while the experimental group (B) received the same program as group A in addition to the maze control training. Measurements for sway index, risk of fall, and knee proprioception before and after 8 weeks of treatment (24 sessions; three times per week). **Results:** There were significant decreases of both sway index and risk of fall in both groups ($p \leq 0.001$ in all measures), significant improvements of the knee proprioception in 30° and 75° in the experimental group (p value = 0.016 and ≤0.001, respectively). The in-between groups' comparison showed significant differences corresponding to both the sway index and risk of fall ($p \leq 0.001$), and a significant difference in 75° ($p \leq 0.001$). **Conclusion:** Adding maze control training to the selected conventional physical therapy improved the kinesthetic awareness in patients with chronic stroke.		
6	Effect of Visual Biofeedback Training on Postural Instability in Chronic Stroke Patients:A Controlled Randomized Trial	Basic Sciences in Physical therapy	Background: Stroke affects postural stability in approximately 85% of stroke survivors. Postural stability is essential for limb functions. Postural stability training for stroke patients still a challenge because of poor recovery of both motor and sensory function. Objectives: To determine the effect of visual biofeedback training on postural instability in chronic stroke patients. Method: 56 hemiplegic patients participated in the concurrent study. They were randomly assigned into two groups (group A; study group; received visual biofeedback training in addition to the selected traditional physical therapy rehabilitation program and group B; control group; received the selected traditional physical therapy rehabilitation program only). The patients underwent pre-and post-treatment assessment using Biodex balance system for measuring postural stability (overall, anterior/posterior and medial/lateral stability indices). Results: There were significantly decrease in overall stability, anterior/posterior, and medial-lateral indices within both groups (P=0.0001 for all measurements). Percentages of improvement of group A were higher than group B in all measurements (54.55%, 54.72%, 52.60%, 40.33%, 36.25%, and 30.14%, respectively). Conclusion: Adding visual feedback training to the traditional physical	2022	DOI: 10.31838/ijpr/2021.13.02.273

			therapy program is more beneficial to improve the postural instability in chronic stroke patients.		
7	Influence of Sensory Integration Training on Sensory Motor Functions in Patients with Thalamic Syndrome.	Basic Sciences in Physical therapy	Introduction Thalamic stroke causes impairment in sensory motor functions; these changes in perception lead to pain and deteriorate postural stability. The goal of this study was to investigate the influence of sensory integration training on pain and posture stability in patients with thalamic syndrome. Methods Overall, 30 patients of both sexes, aged 45–65 years, diagnosed with a thalamic stroke were randomly allocated into 2 groups. The control group received selected sensory training of the conventional physical therapy program and the study group received sensory integration training with the Biodex Balance System beside the conventional physical therapy program. Results The intra-group comparisons with MANOVA revealed statistically insignificant differences in pain, as well as overall, anteroposterior (forward and backward), and mediolateral (right and left) limits of stability after the treatment in the control group (p -value of 0.180, 0.301, 0.792, 0.247, 0.381, and 0.847, respectively). In the study group, there was a statistically significant decrease in pain and improvement in overall, anteroposterior (forward and backward), and mediolateral (right and left) limits of stability after the treatment (p -value of 0.01 for pain and 0.000 for each of the 5 limit of stability variables, respectively). The inter-group comparisons showed statistically significant differences in favour of the study group (p = 0.000). Conclusions Adding the sensory integration training program was effective to decrease pain and improve posture stability in patients with thalamic syndrome.	2022	DOI: 10.5114/pq.2021.108675
8	Influence of a smartphone use on dynamic balance inhealthy adolescents.	Basic Sciences in Physical therapy	Purpose The aim of the study was to detect the immediate and late effects of using a smartphone for 30 consecutive minutes on dynamic balance in healthy adolescents. Methods Overall, 96 healthy adolescents of both genders, aged 15–18 years, were randomly assigned to the study and the control group. The subjects in the study group used a smartphone for 30 consecutive minutes; smartphones were not allowed in the control group. A Biodex system was used to assess the dynamic balance initially, as well as immediately after and 1 hour after the intervention. Results MANOVA test revealed that there were statistically significant differences in the overall stability	2022	DOI: 10.5114/hm.2021.106171

			index and anteroposterior stability index (p = 0.002 and 0.04, respectively), with a statistically insignificant difference in the mediolateral stability index (p = 0.46) within the study group. Significant differences were observed in the immediate measurements of both overall stability index and anteroposterior stability index (p = 0.0001 and 0.03, respectively), while statistically insignificant differences were noted in the measurements of mediolateral stability index between the groups. Conclusions The dynamic balance decreased after 30 consecutive minutes of smartphone use, so care should be taken to avoid accidents while walking or performing other daily activities. This effect, however, disappeared 1 hour later.		
9	Influence Of Hyperbaric Oxygen Therapy on Sensorimotor Functions in Diabetic Peripheral Neuropathy: A controlled randomized trial.	Basic Sciences in Physical therapy	Background: Diabetic peripheral neuropathy progresses with decreased nerve functionality both sensory and motor, leads to high morbidity, mortality, and worsening of the quality of life of patients and their caregivers. Subjects and methods: 42 patients, suffered from diabetic peripheral neuropathy (DPN), assigned randomly into group A (the study group) received 10 sessions of hyperbaric oxygen therapy, breathing 100% of pure oxygen for 60 minutes under 2.5 ATA, in addition to the traditional medical treatment, and group B (the control group) received the traditional medical treatment only. Sensory and motor distal latencies, amplitudes, and nerve conduction velocities were evaluated at the beginning and after two weeks of the study for the sural and peroneal nerves using electromyography (EMG), and patients answered the Arabic Michigan Neuropathy Questionnaire (MNQ) for DPN. Results: The within-group comparisons of the distal latencies showed insignificant decrease in all motor latencies and sensory latencies in group B, while significant decrease of all sensory latencies in group A and only the sensory latencies of left side in group B (P-value= 0.16, 0.32, 0.1, 0.17, 0.004, 0.006, 0.008, and 0.006 in group A, while 0.83, 0.88, 0.12, 0.84, 0.28, 0.71, 0.003 and 0.01 in group B). The within-group comparisons of amplitudes showed insignificant increases in all motor amplitudes and all sensory amplitudes in group B except the stimulating site sole of the left foot. All the sensory amplitudes in group A were significantly increased except the stimulating site head of the left fibula in group A (P-value= 0.56, 0.74, 0.38, 0.66, 0.02, 0.048, 0.04, and 0.15 in group A, while 0.9, 0.44, 0.6, 0.95, and 0.15 in group B). The	2022	DOI: 10.31838/ijpr/2021.13.01.705

			within-group comparisons of NCV showed an insignificant increase in all motor NCV except the NCV at the stimulating site sole of both right and left feet in group A. There was a significant increase in all sensory NCV in group A. The sensory NCV of group B were insignificantly increased except the stimulating site sole of left foot (P-value= 0.02, 0.13, 0.03, 0.14, 0.0001, 0.01, 0.0001, and 0.0001 in group A, while 0.48, 0.36, 0.72, 0.76, 0.21, 0.17, 0.0001 and 0.08 in group B). The within-group comparisons of MNQ showed a significant decrease in group A, while an insignificant decrease in group B (P-value= 0.0001 and 0.8 respectively). Discussion and Conclusion: Adding HBOT induced oxidative stress and endogenous opioid peptides producing an analgesic effect. Adding HBOT produced therapeutic improved the PDN other than depending only on traditional medical treatment.		
10	Low-level laser therapy (photobiomodulation) versus hyperbaric oxygen therapy on healing of chronic diabetic foot ulcers: a controlled randomized trial.	Basic Sciences in Physical therapy	Background and purpose: Diabetic foot ulcers (DFU) and concurrent infections are the most frequent complications in patients with diabetes mellitus. Both low-level laser therapy (LLLT), photobiomodulation (PBM), and hyperbaric oxygen therapy (HBOT) promote the healing of wounds. The purpose of this study was to compare the effectiveness of LLLT versus HBOT on the healing of chronic DFU. Patients and methods: Seventy-five patients with chronic diabetic ulcers aged ranging from 40-65 years were recruited and assigned randomly into three groups. HBOT group received 100% pure oxygen 2.5 ATA delivered for 60 min per session for 30 sessions (5 sessions per week for 6 successive weeks). LLLT group received GaAlAs diode laser producing a total power output of 1440 mW with following wavelengths: 5 Â 850 nm (200 mW), 12 Â 670 nm (10 mW),8 Â 880 nm (25 mW), and 8 Â 950 nm (15 mW); the energy density (flu-ency) was adjusted for 4 J/cm 2 with a pulse frequency of 10 kHz. Each session lasted 8 min every two days. The control group received conventional wound care only (wound cleansing twice daily using saline or similar dressing). Both LLLT and HBOT groups received conventional wound care in addition to their program. Measurements for ulcer surface area (USA; transparency method) and ulcer volume (volumetric method) were performed before starting the study and in the second, fourth, and sixth-weeks post-treatment. Results: Within group comparisons demonstrated a statistically significant decrease in USA and ulcer	2021	DOI: 10.1080/10833196.2021.1876380

			volume in both HBOT and LLLT groups (p-value ¼ 0.0001 in all measurements). The multiple comparisons between groups for USA, there was insignificant difference between HBOT and LLLT groups after 2-, 4-, and 6-weeks (p-value ¼ 0.48, 0.813, and 0.629, respectively), while for ulcer volume, there was a statistically significant difference in favor of the LLLT group only after 2-and 4-weeks (p ¼ 0.037 and 0.042, respectively) while an insignificant difference after 6-weeks (p-value ¼ 0.911). Conclusion: Both LLLT and HBOT accelerate healing in chronic DFU, but the LLLT is more favorable in decreasing ulcer volume after during the first 4-weeks.		
11	The influence of low‐intensity laser irradiation versus hyperbaric oxygen therapy on transcutaneous oxygen tension in chronic diabetic foot ulcers: a controlled randomized trial.	Basic Sciences in Physical therapy	Background and purpose: Diabetic foot ulcers (DFU) and concurrent infections are the most frequent complications in patients with diabetes mellitus. Both low-level laser therapy (LLLT), photobiomodulation (PBM), and hyperbaric oxygen therapy (HBOT) promote the healing of wounds. The purpose of this study was to compare the effectiveness of LLLT versus HBOT on the healing of chronic DFU. Patients and methods: Seventy-five patients with chronic diabetic ulcers aged ranging from 40-65 years were recruited and assigned randomly into three groups. HBOT group received 100% pure oxygen 2.5 ATA delivered for 60 min per session for 30 sessions (5 sessions per week for 6 successive weeks). LLLT group received GaAlAs diode laser producing a total power output of 1440 mW with following wavelengths: 5 Â 850 nm (200 mW), 12 Â 670 nm (10 mW),8 Â 880 nm (25 mW), and 8 Â 950 nm (15 mW); the energy density (flu-ency) was adjusted for 4 J/cm 2 with a pulse frequency of 10 kHz. Each session lasted 8 min every two days. The control group received conventional wound care only (wound cleansing twice daily using saline or similar dressing). Both LLLT and HBOT groups received conventional wound care in addition to their program. Measurements for ulcer surface area (USA; transparency method) and ulcer volume (volumetric method) were performed before starting the study and in the second, fourth, and sixth-weeks post-treatment. Results: Within group comparisons demonstrated a statistically significant decrease in USA and ulcer volume in both HBOT and LLLT groups (p-value ¼ 0.0001 in all measurements). The multiple comparisons between groups for USA, there was insignificant difference between HBOT and LLLT groups after 2-, 4-, and 6-weeks (p-value ¼ 0.48, 0.813,	2021	DOI: 10.1080/10833196.2021.1876380

			and 0.629, respectively), while for ulcer volume, there was a statistically significant difference in favor of the LLLT group only after 2-and 4-weeks (p ¼ 0.037 and 0.042, respectively) while an insignificant difference after 6-weeks (p-value ¼ 0.911). Conclusion: Both LLLT and HBOT accelerate healing in chronic DFU, but the LLLT is more favorable in decreasing ulcer volume after during the first 4-weeks.		
12	Influence of a Selected Prone Positioning Program on Gross Motor Development in Children with Spastic Diplegic Cerebral Palsy	Basic Sciences in Physical therapy	ABSTRACT Background: Cerebral palsy (CP), a heterogeneous disorder of gross motor development, is one of the most important causes of disability influencing children. Objective: To detect the influence of prone positioning on gross motor development in children with spastic diplegic cerebral palsy. Methods: Forty-two spastic diplegic CP children of both genders participated in this study. They were randomly chosen from the Medical Centre of Faculty of Physical Therapy, Modern University for Technology and Information, Cairo, Egypt. Their ages ranged from 12 to 18 months, with partial control of head and trunk according to gross motor function measure (GMFM), and mild spasticity (grade 1, 1+ according to Modified Ashworth scale). Children were randomly assigned into control group, received selected physical therapy program based on the neurodevelopmental principles for 60 minutes, and study group received the selected physical therapy program in addition to a designed prone and quadruped exercise for 30 minutes. Treatment procedures conducted three times/week for three successive months. Results: The in-between comparison of GMFM showed no significant differences in the pre-measures while there were significant differences in the post-measures (t= 1.322, P= 0.194, t= 6.397, and P= 0.000, respectively). Conclusion: The results of this study revealed that prone position training program was effective in improving the gross motor skills in children with spastic diplegia. Keywords: Prone Positioning, Gross Motor Development, Spastic Diplegic Cerebral Palsy	2020	https://japer.in/storage/models/article/xdBwIMIf0l3tUcgXJxDwId7EAErrKBDRpevcFcPgRL7RbK7KQxtAb8z4VItK/influence-of-prone-positioning-on-gross-motor-development-in-children-with-spastic-diplegic-cerebr.pdf
13	Exercise on Maternal and Neonatal Outcomes in Obese Elderly	Basic Sciences in Physical therapy	Background. In obstetric practice, advanced maternal age such as in case of elderly primigravida is known to be associated with adverse maternal and fetal outcomes. Obesity is a commonly occurring risk factor with advancing maternal age. Exercise	2019	https://fizjoterapiapolska.pl/en/article/effect-of-exercise-on-maternal-and-

	Primigravida: A Randomized Clinical Trial.		in pregnancy could prevent and limit adverse maternal and fetal morbidities. Further research was warranted to study the effect of exercise in this high risk group due to lack o f research in this area. Objective. To investigate the effect of a specialized exercise program combined with diet conducted early in pregnancy on maternal and neonatal outcomes in obese elderly primigravida. Methods. Design: A randomized, clinical, controlled trial. Setting: The study was conducted at physical therapy Department of Bab E lS- haria University Hospital, Egypt, between May 2016 and May 2017. Participants: 80 obese elderly primigravida participants enrolled into experimental and control groups. Interventions: The experimental group participants were closely supervised to perform the exercise program starting fro1n 14 weeks' gestation till 3 7 weeks' gestation with a moderate restricted diet and received advice specific to each trimester of pregnancy. while the control group participants were provided with specific instructions to perform the exercise program with the same diet and advice. Outcome measures: Primary outcome measure was the last BMI of each participant measured at 37 weeks of gestation while the secondary outcome measures were mode of delivery, neonatal weight and neonatal APGAR score. Results. Eighty obese elderly primigravida (control group n = 40; experimental group n = 40) were randomized. There were statistical significant differences between groups in last BM!, mode of delivery and neonates APGAR scores at 1st minute of life and 5th minute of life (p < 0.05). While, there was no statistical significant difference between groups in neonatal weight (p > 0.05). Conclusion: A specialized antenatal		neonatal-outcomes-in-obese-elderly-primigravida-a-randomized-clinical-trial/

			exercise program is very effective in decreasing maternal and neonatal complications in obese elderly primigravidae and their off springs.		
14	Influence of Different Exercise Regimens On Segmental Body Fat In Obese Primary School Children.	Basic Sciences in Physical therapy	Purpose: to compare the influence of different exercise regimens on segmental body fat in obese primary school children. Methods: 100 obese children, their ages ranged from 6 to 12 years. Children were randomly allocated into: Group I (control/diet only), II (diet plus aerobic training), III (diet plus resistance training) and IV (diet plus combined aerobic and resistance training). BMI and segmental body fat (using DEXA) were measured before and after 6 consecutive months of the program. Results: Significance in BMI and total fat and legs fat mass/total fat mass % (P= 0.000). Insignificance in trunk fat mass/total fat mass % and limb/trunk fat mass ratio in control group (P=0.155 and 0.109 respectively) while significance in exercise groups (P<0.05).Conclusion: Different exercise regimens had different influences on segmental body fat in obese primary school children.	2019	DOI: 10.5958/0976-5506.2019.04104.4
15	Electromagnetic Field Versus Diclofenac Drugs on Primary Dysmenorrhea: A single-blind randomized controlled trial.	Basic Sciences in Physical therapy	Aim: Primary dysmenorrhea is one of the most common complaints of women and is also the most common gynecological problem worldwide. The cramps of dysmenorrhea are recurrent and 90% of adolescent girls and about 50% of women suffer from it. This study was aimed to determine which is more effective in alleviating primary dysmenorrhea: pulsed electromagnetic field (PEMF) or diclofenac drugs. Material and Method: Fifty adult females with regular menstrual cycle 21-35 days lasting 3-7 days and having the same ordinary daily living activities participated in this study. They were recruited from the students of the Faculty of Physical Therapy, Cairo University, Egypt, and the study was conducted in the Outpatient Clinic of the Faculty of Physical Therapy. Group A received PEMF applied on the pelvic region, 3 times per cycle for 3 consecutive cycles, 20 minutes per day. Group B received diclofenac tablets, 50 mg, only with onset of menstrual pain for 3 consecutive cycles. All subjects in both groups were assessed through measuring the progesterone level in the blood, pain using the Visual Analogue Scale, and physical as well as psychological symptoms using a menstrual symptom questionnaire. Results: The present study revealed a statistically significant improvement (P<0.05) in pain, physical, and psychological symptoms associated with dysmenorrhea and	2019	DOI: 10.4328/JCAM.5890

			progesterone blood level in Group A compared to Group B. Discussion: PEMF was more effective than diclofenac drugs in relieving pain and associated symptoms with dysmenorrhea. Keywords Primary Dysmenorrhea; Pulsed Electromagnetic Field; Diclofenac Drugs		
16	Influence of Scapular Stabilization Exercises on Asymptomatic Forward Head Posture; A Randomized Controlled Trial.	Basic Sciences in Physical therapy	Objective: The aim of this study was to investigate the influence of scapular stabilization exercises (SSE) on correcting asymptomatic forward head posture (FHP). Methodology: Forty participants aged from 20- 30 years with mean (28.72±1.70 years) from both genders were included (21 female-19 male) randomly divided. Study group (A) received SSE and postural correctional exercises (PCE) while control group (B) received PCE only three sessions per week for ten weeks. Cranio-vertebral angle (CVA), and Root mean square (RMS) of muscle activity (EMG) of serratus anterior muscle were measured pre and post-treatment. Results: Statistical analysis in form of MANOVA showed significant changes within-group at study group (A) in each of CVA, and muscle amplitude of serratus anterior both sides pre and post treatment with (P value =0.000). Also, a significant change within-group at control group (B) with (P value =0.000). The in between-group analysis showed no significant change in pre-value of all variables as (P=0.716, 0.291, 0.217) respectively, post-treatment showed a significant change in CVA as (P=0.000) and muscle activity for serratus anterior muscle showed a significant change of right side as (P= 0.004) while left side showed no significant change (P=0.112) but percent of improvement in study group (A) (R 83.6%, L 54.3%) higher than control group (B) (R 40.5 %, L 29 %) respectively. Conclusion: SSE is considered as an effective method in correcting FHP in asymptomatic FHP subjects.	2019	DOI: 10.37506/v10/i12/2019/ijphrd/192406
17	Effect of Different Doses of Low-Intensity Laser Therapy on Total Active Range of	Basic Sciences in Physical therapy	**Objective** To investigate the difference between the effects of different doses of low-level laser therapy (4 or 1 J/cm^2) on the return of hand active range of motion (ROM) after flexor tendon repair. **Participants and methods** A small trial was conducted on 33 patients with 45 injured fingers of both sexes who underwent primary repair after complete cut of hand flexor tendon. Their age ranged from 20 to 40 years old. They were recruited from the plastic surgery department. The treatment began the first day postoperatively after permission by surgeons using Duran protocol and splinting.	2019	DOI: https://doi.org/10.4103/JMISR.JMISR_5_19

	Motion After Hand Flexor Tendon Repair.		Transcutaneous electrical nerve stimulation (TENS), as well as LASER therapy, was started the seventh day after surgery. Laser treatment lasted for 3 weeks only, whereas other modalities lasted for 3 months. The sample was randomly divided into three groups each of 15 injured tendons. Group A received the conventional treatment plus laser therapy (1 J/cm^2), three sessions/week for 3 weeks. Group B received the traditional treatment plus laser therapy (4 J/cm^2), three sessions/week for 3 weeks. Control group received the conventional treatment only. All patients received the early conventional physical therapy after permission by the surgeon: TENS plus early therapeutic exercises following Duran protocol, three sessions/week for 3 months. The ROM was measured at eighth and 12th week after the commencement of treatment. **Results** At second month after commencement of treatment, there was a positive effect of laser therapy with either doses 1 or 4 J/cm^2 on total hand active ROM after flexor tendons repair, with more effect noticed in group B (4 J/cm^2). At third month after commencement of treatment, best results in hand active ROM were seen in group B (4 J/cm^2), with prognosis being excellent in 46.7% of patients, good in 33.3% and fair in 20.0% according to the modified Strickland classification. **Conclusion** The 4-J/cm^2 laser dose is more efficient than laser dose of 1 J/cm^2 in the treatment of repaired hand flexor tendons in addition to conventional treatment (TENS stimulation plus Duran protocol therapeutic exercises) in early regain of active ROM that can affect return of early better hand function.		
18	Influence of Sensory Integration Training on Postural Instability in Elderly With Parkinsonian Disease Following	Basic Sciences in Physical therapy	Background Impaired posture is strongly associated with function particularly in patients with parkinsonian disease (PD). Objective To detect the effect of sensory integration training on postural instability in elderly PD following stereotactic surgery. Patients and methods A total of 27 patients with idiopathic PD were assessed before and after 12 weeks by the postural stability test. They were randomly assigned into three groups: group I (sensory integration training), group II (stereotactic surgery), and group III (sensory integration training after 10 days postoperatively). Results There was significant improvement in group III more than in groups I and II. The percent of improvement of group III was higher concerning the overall stability index (48.86%, t=7.088 and P=0.0001(, anterior/posterior index (74.61%, t=21.240	2019	DOI: 10.4103/bfpt.bfpt_1_19

	Stereotactic Surgery.		and P=0.0001), and medial/lateral index (55.81%, t=14.014 and P=0.0001). Group III was superior to groups I and II (P=0.026 and 0.001, 0.040 and 0.0001, and 0.049 and 0.0001). Conclusion Sensory integration training improved postural stability in elderly with PD following stereotactic surgery		
19	Root Mean Square of Dominant Versus Non-Dominant Latissimus Dorsi Muscles during Unilateral Carrying	Basic Sciences in Physical therapy	Abstract: Background: unilateral carrying causes many physical, physiological and biomechanical problems. Purpose: was for investigating the root mean square of dominant versus non-dominant Latissimus Dorsi muscles during unilateral carrying. Subjects: thirty normal students their ages ranged from 18 to 22 years. Method: Root Mean Square (RMS) of myoelectrical activity of Latissimus Dorsi muscles was measured during carrying unilateral shoulder bag with 10% of body weight (BW) on non dominant shoulder for 5 minutes. Results: Mann Whitney test revealed highly significant decrease of the RMS of EMG of non dominant side than of the dominant side with mean (5.20 + 0.8 and 9.14 + 2.43 mv) respectively (Z-value= -3.377 and P=0.001). Conclusion: unilateral carrying of 10% BW shoulder bag lead to asymmetrical increase in latissmus dorsi muscles activity. Key word: unilateral bag carrying, myoelectrical activity, root mean square, Latissimus Dorsi muscles.	2017	https://www.sphinxsai.com/2017/ch_vol10_no2/2/(468-476)V10N2CT.pdf
20	Efficacy of Muscle Energy Technique versus Myofascial Release in Management of Patients with Cervical Myofascial Pain	Basic Sciences in Physical therapy	Abstract: Introduction: Manual therapies had specific efficacy in management of myofascial syndromes characterized by presence of myofasciel trigger points. Purpose: to investigate the efficacy of muscle energy technique versus myofascial release in patients with cervical myofascial pain. Subjects: Forty five male patients, their age ranged from 30-40 years old, with cervical myofascial pain randomly assigned into 3 groups. Methods: experimental Group (A): had received muscle energy technique (post-isometric relaxation), Experimental Group (B) had received myofascial release (progressive pressure release) and Control Group (C) had received the traditional physical therapy rehabilitation program (infrared heat, ultrasound and exercises) 3 sessions/week for 4 weeks. Assessment: were performed by electronic digital algometer and Neck disability index prior before and after the completion of the 4 weeks treatment program. Results: Paired t-test revealed that there were high significant differences between pre and post treatment of pain pressure threshold (t= 29.86, p= 0.001& t= 24.61, p= 0.001 and p= 11.16, p= 0.001) and neck disability index (t= 14.28, p= 0.001& t= 14.01, p= 0.001 and t= 13.74, p= 0.001) within groups as the mean values increased in all 3 groups. ANOVA test revealed a significant difference between the 3 groups for the post treatment value (F=112.3 & P=0.0001 and F=43.64 & P=0.0001) respectively.	2017	https://sphinxsai.com/2017/ch_vol10_no2/2/(477-485)V10N2CT.pdf

			Post Hoc test revealed that group A and group B were improved more than group C. Conclusion: muscle energy technique and myofascial release were effective in treating cervical myofascial pain. Key wards: post-isometric relaxation, progressive pressure release, cervical myofascial pain, electronic digital algometer and neck disability index		
21	Efficacy of Therapeutic Taping on Wrist Flexors Hyper Tonicity in Hemiplegia	Basic Sciences in Physical therapy	Background: wrist flexors hyper tonicity is one of the most common complications associated with hemiplegia. Purpose: to investigate the efficacy of therapeutic taping on wrist flexors hyper tonicity in hemiplegia. Design: A pre-test post-test experimental-control design. Subjects: Thirty hemiplegic patients from both genders (male\female:22\8).Their age ranged between (42 -63) years. Selected from out clinic patients of Faculty of Physical Therapy, Cairo University. Materials and methods: They were assigned randomly in two groups: group (A): Experimental group (n=15) received selected physical therapy program and therapeutic tapping and group (B): Control group (n=15) received selected physical therapy program only. All patients were tested for Hoffmann reflex/myogenic response ratio (H/M ratio) before and after twelve sessions using electromyography (EMG) in electromyographic unit of Kasr El-Aini hospital. Results: Paired t-Test revealed that there was high statistical significant decrease in hyper tonicity (t= 4.36 and p=0.001) concerning experimental group (pre-test mean= 47.27% ±11.96, post-test mean= 32% ±7.2) but there was insignificant statistical increase in hyper tonicity (t= 0.44 and p=0.07) concerning control group (pre-test mean 46.9% ±8.01,post-test mean= 48.15% ±7.3). Unpaired ttest revealed that there was insignificant results concerning the pre-means of H/M ratio (p= 0.07and t= 0.8) while there was significant results concerning the postmeans of H/M ratio (p= 0.001 and t= 4.06). Conclusion: adding therapeutic taping to physical therapy sessions decreased wrist flexors hyper tonicity for hemiplegia. Key words: hemiplegia, therapeutic tape, hyper tonicity, H/M ratio.	2017	https://scholar.cu.edu.eg/?q=anazih/files/lbhth_lthlth.pdf
22	Influence of Wearing High Heel on Different Foot Angels in Normal Female Subjects	Basic Sciences in Physical therapy	Background: Foot posture and pressure on the ball of the foot altered by wearing high heel. Its repeated wear is known to strain the hips and knees as well as increasing the risk of conditions such as osteoarthritis, hammer toe, back problems, bunions and corns. Purpose: To investigate the influence of wearing high heel on different foot angels in normal female subjects. Subjects: Thirty normal female subjects their age ranged from 18-25years old; they were volunteers. Method: Subjects already wearing high heel (two inch) for at least eight weeks. Plain loaded X-ray on the foot to be examined was performed. Four angles were	2017	https://scholar.cu.edu.eg/?q=anazih/files/6_nskh_lbhth_lrl.pdf

			measured meary ’ s, calcaneal pitch, Talonavicular coverage and lateral talocalcaneal angles. Results: There were three angles were mostly affected and had marked flat foot as follows; Meary's angle [28/30 (93.33%)], calcaneal pitch angle [27/30 (90%)] and finally talonavicular [19/30 (63.33%)]. Although, lateral talocalcaneal angle hadn’t affected yet [7/30 (23.33%). So, the degree of angle affection in females were ranged 14 to 25 (46.66% to 83.33%). Conclusion: wearing of high heel for long period of time had impact on different foot angels. Key Words: Foot arches, high heel, meary’s angle, calcaneal pitch angle, talonavicular coverage angle and lateral talocalcaneal angle.		
23	Efficacy of Laser Pulse Frequencies on Blood Flow in Type 2 Diabetic Patients	Basic Sciences in Physical therapy	Background: research reports had noted apparent increase in cutaneous and deep blood flow as a result of low intensity laser therapy (LLLT) in normal subjects. Purpose: was to investigate the effective laser pulse frequency either (200 or 2000 Hz) on improving blood flow in type 2 diabetic patients. Subjects: Forty five diabetic patients selected from out clinic of Kasr El-Aini Hospital, Cairo University assigned randomly into three groups. The blood flow volume, blood flow velocity and caliper of the blood vessel were evaluated before laser application and after twelve sessions using duplex Doppler ultrasound. Methods: Combined He-Ne and infrared LILT was administered three times a week for twelve sessions at intensity of 3 J, power 500 mW, 808 nm duration 15 min and pulse frequency 200 Hz for group I, 2000 Hz for group II, and sham LILT for group III on the sural artery at posterior aspect of dominant leg. Results: paired t-test revealed that low pulse frequency (200 Hz) LILT produced significant improvement in blood flow volume and blood flow velocity (t= 1.76, p= 0.001 and t= 2.8, p= 0.01) respectively (P	2017	https://scholar.cu.edu.eg/sites/default/files/anazih/files/6_nskh_lbhth_lkhms_.pdf
24	Effect of Kinesio Tape on Fatigue Timing in Lower Back Muscles in Normal Subjects	Basic Sciences in Physical therapy	Background: Fatigue of the back muscles had been found to be an important factor in the increased movement of the body’s center of pressure. Purpose: to investigate the effect of kinesio tape on fatigue timing in lower back muscles in normal subjects. Subjects: Forty healthy sedentary volunteers from both sexes. Methods: Subjects were randomly assigned into two groups. Experimental group (their mean age was 20.25 ±2.22 years) and Control group (their mean age was 19.95±1.76 years), all subjects were tested twice (with and without kinesio tape) within two consequent days. Results: paired t-test showed significant improvement in peak torque of lumbar extensor muscles and number of repetitions of maximum muscle contraction in experimental group (t= 4.31, p= 0.0004 and t=6.04, p=0.005respectively), but showed insignificant differences in control group (t=1.92, p=0.07	2015	https://scholar.cu.edu.eg/?q=anazih/files/lbhth_lsb.pdf

			and t=0.15, p=0.88 respectively). Unpaired t-test between groups revealed that there were insignificant differences in peak torque while showed significant improvement in the number of repetitions (t=0.21, p=0.8 and t=2.56, p=0.014respectively). Conclusion: Kinesio tape improved the peak torque and number of repetitions of the lower back muscles in normal subjects. Keywords: Lower back muscles fatigue, muscle fatigue timing, kinesio tape.		
25	The Effect of Low-Level Laser Therapy on Electrically Induced Muscle Fatigue: A Pilot Study	Basic Sciences in Physical therapy	The purpose of this pilot study is to determine if low-level laser therapy (LLLT) could attenuate skeletal muscle fatigue induced by surface neuromuscular electrical stimulation (NMES) in healthy volunteers. Five college-age participants underwent three cross-over randomized trials: two (LLLT + NMES) test trials and a control trial (NMES only), in which NMES was applied to their dominant knee extensor muscle group. The LLLT doses, 500 mW at 808 nm, were either adjusted to deliver a total energy of 7 J for 10 min or 3 J for 5 min in a blinded fashion. Following LLLT irradiation, the NMES protocol was immediately delivered for 3 min to induce fatigue in the knee extensor muscle group. The five participants completed the three trials. After the control trial, torque significantly decreased (62%; $p < 0.0001$) at the end of 3 min. There was no significant difference between the 7 J and 3 J trials on muscle fatigue. Following both LLLT trials, torque significantly decreased (51%; $p < 0.0001$) at the end of 3 min. Although there was a difference (11%) in fatigue between the two LLLT trials and the control trial, this difference did not attain statistical significance ($p = 0.63$). LLLT did not attenuate muscle fatigue evoked by NMES, but this needs to be further addressed in human studies and clinical settings. The lack of significant findings could be explained by the small sample size and the selection of LLLT parameters.	2008	DOI: 10.1089/pho.2007.2161
26	Scapular Stabilization Exercise versus Neck Stabilization Exercise in Females with	Basic Sciences in Physical therapy	Background: Neck pain is a common musculoskeletal problem and reported to be a major health problem worldwide that affects the quality of life. Neck pain is a common phenomenon related to Muscle deterioration and scapular dysfunction with higher prevalence in females than males. Aim of Study: This study was conducted to compare the efficacy of scapular stabilization exercise to neck stabilization exercise on chronic mechanical neck pain.	2021	DOI: 10.21608/mjcu.2021.225160

	Chronic Mechanical Neck Pain		Subjects and Methods: Forty-five female patients with history of chronic neck pain participated in this study. The patients were randomly assigned into three equal groups. Group A (control group) received hot packs, ultrasound, stretching exercises. Group B (Scapular stabilization) received scapular stabilization exercise plus the same control group program. Group C (Neck stabilization) received neck stabilization exercise plus the same control group program. The treatment sessions were conducted three times per week every other day for six successive weeks. All subjects assessed for pain using visual analogue scale (VAS) and for functional activity using Neck disability index (NDI) and Cervical range of motion device (CROM) before and after treatment. Results: VAS, CROM and NDI parameters improved with all modalities. Post treatment results revealed that there was a significantly superior improvement in pain intensity, disability and functional mobility in the neck stabilization group. Conclusion: Exercise and conventional physical therapy treatment is significantly effective in treating chronic neck pain with superiority of neck stabilization exercise.		