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Research Article **Published Date:-2017-11-23 00:00:00**

Influence of elbow angle on the reliability and validity of bioelectrical impedance analysis

Hand-to-hand bioelectrical impedance (HH BIA) is a low-cost method to estimate percent body fat (%BF). The BIA method is consistently reliable, but questions on validity remain. We have observed anecdotally that elbow position can render consistently different measures of %BF while using HH BIA, thus leading to the question: Does elbow angle influence the validity of measures derived using HH BIA? The purpose of this study was to assess the effect of elbow position (i.e., IN=flexed to 90° versus OUT=fully extended) on the reliability of HH BIA on 44 male and 24 female healthy adults (age=21±2 yrs, BMI=23±3). An additional aim was to assess the validity of the HH BIA %BF on a subset of subjects (n=12) using air displacement plethysmography (BOD POD®) as the criterion measure. The IN position was ~4%BF lower than the OUT position for HH BIA (p=0.05, effect size=0.67). Measures of %BF for both trials for the IN [intraclass correlation coefficient (ICC)=0.99, coefficient of variation (CV)=2.99%] and OUT (ICC=0.99, CV=1.48%) conditions were highly reliable. On the subsample, the OUT (18.3±6.7 %BF) position exceeded both the IN (14.5±7.4 %BF) and the BOD POD® (16.1±7.8 %BF) measures (p<0.05); however, IN and BOD POD® measures of %BF did not differ (p=0.21). These findings support that HH BIA is a reliable measure at both elbow positions; however, %BF estimations vary considerably (~4%) with respect to the criterion measure depending on elbow position. The OUT position was found to overestimate criteria %BF. Further research may reveal an optimum elbow angle position for HH BIA estimates of %BF.

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Administration of Non-Pharmachologic Intervention in the control of Hypertension among selected volunteer retirees in Awka Metropolis Anambra State Nigeria

High blood pressure under medical palance is associated with a variety of circulatory diseases, and it has been estimated that over 12% of all deaths in the world is directly or remotely connected with hypertension. It is said that one out of every five persons, can expect to have high blood pressure at one time or the other, during one's life time. Based on hemodynamic equation, the mean arterial pressure is equal to cardiac out-put, times resistance (p means=Q x R). Hence hypertension is usually as a result of either an increased cardiac output and/or an increased resistance. The most common form of high blood pressure in humans is called "essential hypertension", while is said to have no known cause. However this research aims at showing how a 12-week moderate exercise with bicycle egometer (i.e., use of non-pharmacologic approach to reduce the resting heart rate and blood pressure of 6 volunteer retired civil servants from Anambra state civil service and 6 retired academic staff of Nnamdi Azikiwe university in Awka. The paired T-test analysis of data obtained revealed a statistical significant effect of the moderate 12-week exercise on bicycle egometer, on the resting heart rate and blood pressure of the experimental group of the respondents. Hence it could be concluded that the administration of moderate exercise on bicycle egometer could be an effective use of non-pharmacologic intervention in the control and prevention of high blood pressure or hypertension among the elderly.

Research Article **Published Date:-2017-11-03 00:00:00**

Perception of Nutrition and Exercise as a Tool in Controlling Cardiovascular Diseases among the Elderly in Anambra State

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The research investigated the perception of nutrition and exercise as a tool in controlling Cardiovascular Diseases (CVDs) among elderly civil servants in Anambra State of Nigeria. A total of 250 respondents comprising 150 elderly academic staff Nnamdi Azikiwe University Awka and 100 senior civil servants in the Anambra state civil service, who willingly, volunteered to participate in the study. Their ages ranged between 55-65 years purposively selected. The instrument for data collection was a self-structured questionnaire, with a reliability value of 0.73 using the test retest method. All data collected were subjected to descriptive statistics of frequency, percentages and chi square tested at 0.05 level of significance. Findings from the study showed that nutrition (diet) and exercise have significant effect in the prevention/control of (CVDs) among the elderly. It is therefore recommended that at the civil service secretariats, universities and other establishments/parastatals, should establish high standard eateries (restaurants) where qualified caterers, would regularly provide nutritious diet, at subsidized rate for workers in this category. In order to enable these class of workers have at least one good meal per day, in addition to a mandatory one-work-free afternoon (2.00pm-4.00pm) for routine/regular physical exercises for these class of workers.

Case Report **Published Date:-2017-10-27 00:00:00**

Seroma formation as a rare complication of lateral epicondylitis release: A case report

Case: A 45 year old male, >1 year status post left elbow lateral debridement for lateral epicondylitis, presented with a two week history of a progressive, tender mass on the lateral aspect of his left elbow. MRI showed evidence of a defect in the joint capsule, consistent with the formation of a seroma. The patient underwent revision of the left lateral epicondyle debridement with ECRL/EDC tendon repair and capsular reconstruction.

Conclusion: Tendon repair and capsular reconstruction is an effective and successful method for the treatment of a seroma caused by leakage of joint fluid after lateral epicondylar debridement.

Research Article **Published Date:-2017-10-17 00:00:00**

Vertebral pain syndrome and physical performance assessing in older women with vertebral fractures

The purpose of this study was to assess the peculiarities of vertebral pain syndrome, parameters of physical performance and quality of life indices in women of older age depending on the presence of vertebral fractures (VF). This study was performed with participation of 215 women aged 50-89 years old which were divided into two groups: first one-women without any previous osteoporotic fractures (n=143), second group - patients with VF in thoracic and/or lumbar spine (n=72).

The presence and intensity of pain in the thoracic and lumbar spine were evaluated using the 11-component visual analog scale (VAS), physical performance-with following functional tests: 3-, 4- and 15-meter tests (gait speed), static balance (a side-by-side position, a semi-tandem position and a full-tandem position), 8-feet test and «five timed chair stands» (coordination and strength), hand grip strength (by dynamometer), measurement of arterial pressure (systolic and diastolic), heart and respiratory rates, breath holding, chest excursion (mean and on the inhalation and the exhalation), lateral trunk lean, Schober and Thomayer tests.

It was demonstrated that the intensity of vertebral pain (pain at the time of investigation, the most common level of pain, pain in the best periods of the disease) and some physical performance tests (lateral trunk lean and chest excursion (mean index, during the inhalation and exhalation), hand grip strength, 15-meter gait speed test and five-repetition sit-to-stand test) are significantly worse in women with VF than corresponding parameters in persons without fractures. It should be taken into account during the assessment of physical performance and development of rehabilitation programs for older age women with vertebral fractures.

Research Article **Published Date:-2017-10-11 00:00:00**

The effect of cognitive strategies of association and dissociation on central nervous activation: A controlled trial with long distance runners

The purpose of the present study was to experimentally assess the effect of cognitive strategies of association and dissociation while running on central nervous activation. A total of 30 long distance runners volunteered for the study. The study protocol consisted on three sessions (scheduled in three different days): (1) maximal incremental treadmill test, (2) associative task session, and (3) dissociative task session. The order of sessions 2 and 3 was counterbalanced. During sessions 2 and 3, participants performed a 55 min treadmill run at moderate intensity. Both, associative and dissociative tasks responses were monitoring and recording in real time through dynamic measure tools. Consequently, was possible to have an objective control of the attentional. Results showed a positive session (exercise+attentional task) effect for central nervous activation. The benefits of aerobic exercise at moderate intensity for the performance of self-regulation cognitive tasks are highlighted. The used methodology is proposed as a valid and dynamic option to study cognitions while running in order to overcome the retrospective approach.