Conclusions: These results indicate that a lack of adverse effects of infliximab therapy on the BMD and the authentic improvement of indicators of the BMD as in the neck of the femur and in the lumbar spine.

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DELAYED EFFECTS OF SHORT TERM ACUTE AEROBIC EXERCISE ON MICROALBUMINURIA AND INSULIN SENSITIVITY

K. Frames[1]
[1]Department of Biokinetics and Sports Science, University of Zululand, Richards Bay, South Africa

Objectives: The prevalence of obesity has increased worldwide and represents a major public health concern. Obesity is often associated with an increase in urinary albumin excretion and impaired insulin sensitivity. Whilst it is clear that exercise is beneficial in terms of improving insulin sensitivity, the optimal exercise prescription in different cohorts is still unknown, hence the recent increase in studies investigating high vs. moderate intensity interventions. It is also unclear what effect acute bouts of exercise may have on microalbuminuria, a marker which is more commonly being utilized for screening and prognosis of diabetes and cardiovascular disease.
Aim: To investigate the effects of an acute bout of aerobic exercise on insulin sensitivity and microalbuminuria in obese, and normal weight sedentary females.
Methods: Eighteen female participants (24.78 ± 5.17y; BMI 34.55 ± 6.22 kg/m^2) and ten normal weight participants (24 ± 3.74y; BMI 22.98 ± 1.48 g/m^2) leading sedentary lifestyles, participated in a single, 30 minute bout of moderate (65 % - 75 % Heart Rate Reserve [HRR]; 12–13 Rate of Perceived Exertion [RPE]) and high intensity exercise (75 %-85 % HRR;14–15 RPE), over a two week period. Participants provided blood (GLUCOSE/INSULIN RATIO, HOMA INDEX, QUICKI INDEX, plasma insulin, plasma glucose) and urine samples (ALBUMIN/CREAT, creatinine, microalbumin) prior to each exercise bout and at 24 h, 48 h and 72 h post-exercise.
Results: Fasting pre-exercise plasma glucose, HOMA Index and QUICKI Index were significantly ($p < 0.05$) different between the obese and control groups. No change in microalbuminuria was observed following the two bouts of exercise. A significant ($p = 0.026$) time effect was observed for albumin- creatinine ratio (ACR) with it being reduced at 48 h and 72 h post exercise. No interaction effects were observed between groups or exercise intensities. U-creatinine was significantly ($p < 0.05$) elevated in the normal weight group at 48 h post exercise. Both the obese and normal weight groups showed significant ($p = 0.001$) reductions in the glucose/insulin ratio at 24 h and 48 h post exercise with no differences observed between the groups or exercise intensities.
Conclusion: Acute bouts of different aerobic exercise intensities (moderate and high) failed to induce significant changes in overall microalbuminuria and insulin sensitivity in obese and normal weight females.

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EFFECTS OF CYCLIC YOGA ON BONE HEALTH IN POSTMENOPAUSAL WOMEN

Z. Maghbooli[1], A. Bakhshizadeh[2], M. Machawe[3], A. Hossein-Nezhad[1], B. Yarjoo[2], S. Ahmadi[3], M. A. Azarbayjani[4], S. Shirazi[1], S. M. Eshaghi[1]
[1]Osteoporosis Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran, [2]Islamic Azad University, Tehran, Islamic Republic of Iran, [3]Payam-e-Mehr International Yoga Center, Tehran, Islamic Republic of Iran, [4]Department of Exercise Physiology, Islamic Azad University, Central Tehran Branch, Tehran, Islamic Republic of Iran

Aims: The purpose of this study was to investigate the effect of > 5 years continuous practice with cyclic yoga training on BMD in postmenopausal women.
Methods: 21 trained women were randomly assigned as yoga group (YE) and compared with age matched control group (CON). The YE participated in cyclic yoga training classes for > 5 years, 60 min per week; the control group did not participate in any regular exercise programs. Any chronic illness like auto immune disorders, cancers, neurological diseases and any conditions that under treatment with corticosteroids were excluded. BMD was measured using DXA and also clinical data was obtained.

Results: The results showed that regular long-term cyclic yoga program had a small positive effect on BMD of all sites. Also, BMI in YE was significantly lower than CON. While BMD did not vary significantly between YE and CON, total hip and thoracolumbar spine BMD In YE were higher than CON after adjustment for BMI. Z-score discordance between spine and total hip measurement sites in YE was lower than CON.

Conclusion: Our results suggest that regular long-term cyclic yoga had a positive effect on BMD in postmenopausal women. Future yoga interventions should focus on greater sample size to elicit improvements in BMD.

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HOW MAJOR THALASSEMIA AFFECTS ENDOCRINOLOGICAL, BMD AND BONE METABOLISM PARAMETERS: A CROSS SECTIONAL STUDY

Z. Hamidi[1], A. A. Hamidieh[2], M. R. Mohajeri-Tehrani[1], A. Naghghash[3], M. Behfar[2], F. Mohseni[1], K. Alimoghaddam[2], H. Rashidian[1], A. Ghavamzadeh[2], S. Shirazi[4], M. Pajouhi[1], B. Larijani[1]

[1]Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran, [2]Hematology-Oncology and Stem Cell Transplantation Research Center of Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran, [3]Shahid Beheshti University, Torfeh Hospital, Tehran, Islamic Republic of Iran, [4]Osteoporosis Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran

Background: β-thalassemia major patients frequently have low BMD and increased fracture risk. We tried to determine how thalassemia affects endocrinological, BMD and bone metabolism parameters.

Methods: Thirty β-thalassemia major patients with mean age of 18.2 ± 11 (2 – 45 y/o) entered the study. Female to male ratio was 8/22. 18 of patients aged less than 20 years (pediatric patients). Physicians collected demographic; anthropometric; menstrual; transfusion and treatments histories; and serum levels of ferritin, prolactin, LH,FSH,T4,T3, TSH, IGF-1, testosterone (in males) or estradiol (in females) ACTH, cortisol and bone-specific alkaline phosphatase and osteocalcin (bone formation markers), NTX (bone resorption marker), Ca, P, Alk ph, PTH and vit-D determined. Study participants underwent a measurement of BMD by Hologic Discovery QDR model.

Results: Low IGF1, short stature, subclinical hypothyroidism, hypogonadotropic hypogonadism, high prolactin level were found in 63 %, 40 %, 10 %, 13 % and 6.6 % of our patients, respectively. Low vit-D and Z-score ≤ -2 in spinal and femoral regions (neck and total) found in 76 %, 43 %, 20 % and 16 % of our patients. Correlation of age, sex and ferritin with anthropometric, laboratory and BMD parameters examined. Women showed significantly higher FSH (P value = 0.031). Ferritin correlated only with prolactin and LH (negatively) and positively with phosphorus (P values, 0.027, 0.049 and 0.016, respectively). Age correlated positively to height, weight, BMD of femoral (neck and total) and spinal regions (P values, <0.001, <0.001, 0.005, 0.013 and <0.001, respectively). T3, total Alk ph, bone specific alkaline phosphatase, NTX and Z-scores of total femoral and spinal regions correlated negatively with age (P values, 0.006, 0.041, 0.010, 0.008, 0.015 and <0.001, respectively). Mean age of short stature patients and who had Z-score less than −2 in spinal region were significantly higher than those who were normal (P values, 0.024 and 0.002, respectively).

Conclusion: Low prevalence of hypogonadotropic hypogonadism may be due to HRT in our adult patients (a routine treatment in them). However it seems replacement of sex hormones do not reduce the prevalence of short stature in them. This may be due treatment onset that begins only after delayed puberty clears. The main factor related with short stature and lower Z-scores of the femur and spine was age. So, we recommend early monitoring of thalassemia patients (in their childhood and before adolescence) for these complications.

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