gene, is a strong candidate to explain how the disease modifier polymorphisms may contribute to a lower risk for obesity among trained individuals (Kilpelainen et al., 2011). It has been shown that adults who are homozygous for the A-allele weigh on average 1.5 to 3 kg more than those homozygous for the T allele. This finding has now been replicated in multiple obese cohorts (Fawcett and Barroso, 2010).The aim of the study was to examine possible relationships between T/A polymorphism of FTO with fat accumulation among 101 Kalmykian males (46 wrestlers aged from 14 to 26 years and 52 sedentary controls aged from 17 to 28 years). The program included standard anthropometric measurements (Bunak, 1941). For molecular genetic analysis buccal smears were collected. Genome DNA was extracted with the technique of alkaline extraction. Genotypes were determined with the minisequencing technique followed by MALDI-TOF detection (Ross et al., 1998). Statistical analysis, performed with the software «Statistica 8.0», included descriptive statistics, normalization procedure, one-way ANOVA with Scheffe's test for multiple comparisons. Statistical analysis has revealed the tendency to significant difference in genotype frequencies between wrestlers (FTO*TT 52.5% FTO*AT 32.5% FTO*AA 15.0%) and sedentary controls (FTO*TT 48.9% FTO*AT 32.5% FTO*AA 18.6%), $\chi^2 = 5.52$, p=.06 There is a certain increase of T-allele frequency in the wrestlers' group (69% vs 65%). In general, the athletes demonstrate lower fat accumulation matching with the controls. ANOVA results revealed a lot of associations between FTO genotype and anthropometrical characteristics, describing fat accumulation both in the wrestlers' group (weight, fat mass, chest, waist and hips circumferences, trunk and leg skinfold thicknesses) and in the sedentary controls (trunk skinfold thickness). The carriers of two mutant alleles (AA genotype) demonstrate increased parameters of fat accumulation in both groups. Thus, the presence of two rare alleles of the FTO gene polymorphic system in the genotypes of the investigated Kalmykian males could be considered as a risk-factor of increased fat accumulation. This research is supported by the RFBR grants # 13-06-00702.

Key words: *FTO gene, fat accumulation, wrestlers, Kalmyk males*

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ANTHROPOMETRIC NUTRITIONAL ASSESSMENT OF EGYPTIAN CHILDREN WITH AUTISM

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Autism is the fastest rising developmental disorder in the world today. Studies denote aberrations in conduct during meals, selectivity of food as well as problems in timing of meals. The aim of this study is to assess the nutritional status of children suffering from autism using anthropometric criteria. 100 Egyptian children diagnosed with autism of the age range 3-10 years and of whom 71 males and 29 females were studied. Body weight, height, body mass index, mid-upper arm circumference and triceps skinfold thickness had been assessed in view of the relevant measurements, by age and sex, of normal healthy Egyptian children. The mean Z score of all measurements attempted, calculated BMI and its standard deviations as well as the range are presented. Using single sample t-test, it was found that all measurements are significantly higher than normal with the exception of body height and mid-upper arm circumference. Probably the increase in fat component in our autistic children is due to increased carbohydrate and fat intake as well as sedentary life style, thus suggesting introduction of a feeding program for such children to overcome the unfavorable consequences of the disease.

Key words: *autism, anthropometry, nutrition, children, Egypt*

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