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The ongoing identification of novel obesity genes entails several important questions. i) The genetic variation that functionally underlies an association signal needs to be detected. ii) The function of identified genes (and gene variants) needs to be assessed in in vitro and in vivo models. iii) The respective pathway requires identification and characterization. iv) Implications of novel genetic findings for obesity-related phenotypes and comorbid disorders need to be assessed. v) Finally, developmental aspects require elucidation. Rezhak and co-workers (Germany) [1] used generalized estimation equation models to account for correlations between repeated measurements over time and to assess the potential influence of the *FTO*-SNP genotypes for rs1558902 and rs9935401 on the development of BMI, overweight and obesity in children from birth up to 6 years. The 2,732 children were ascertained as full-term neonates in two distinct German cohorts and followed up repeatedly (mean of 8.7 anthropometric measurements) during the 6-year observation span. During the first 3 years of life, the *FTO* genotypes at the two SNPs revealed no effect on BMI (adjusted for gender and maternal smoking during pregnancy). Homozygous minor allele carriers began showing a higher BMI as of age 3. This trend became significant as of age 4; the effect increased until age 6. The results extend previous studies that also found no effect of *FTO* genotypes on BMI or weight at birth and a significant effect as of the post-toddler age. The intrauterine environment has a strong influence on anthropometric variables of newborns and infants; after 2–3 years of age the effect of the genetic make-up becomes discernible. Further research is required to substantiate that the developmental onset of the *FTO* effect after age 3 is indeed due to the vanishing effect of the intrauterine environment. Another less likely explanation is that the respective pathway is not (or only minimally) operative prior to age 3.

The Greek prevalence rate of childhood obesity has been found to be among the highest in Europe. In a large study conducted by Veltsista et al. (Greek) [2] and based on a total of 11,048 neonates ascertained in April 1983 (equivalent to

approximately 8% of all annual births), self-report and parental report data were available at both ages 7 and 18 for a subgroup of 2,842 probands. At age 7, rates of overweight (17.6%) and obesity (6%; defined using BMI reference proposed by the International Obesity Task Force) were similar in boys and girls. At age 18, males had a significantly higher prevalence of overweight and obesity than females (19.1 vs. 8.0% and 3.6 vs. 1.0%, respectively); overweight/obesity persisted in 48.2% of the males versus only 22.1% of the females. Similar gender differences have also been observed in Spain, Thailand, China and Brazil. Veltsista et al. substantiate the high rates of overweight and obesity among Greek youths; the rates were comparable to those of Canada and the USA. Interestingly and in contrast to other European countries, both a higher parental education and urban living were positively associated with obesity. The authors argue that this difference is due to the, compared to other European countries, more recent socio-economic changes in Greece.

Proper use of very-low-energy diets (VLEDs) result in substantial weight loss over a short time period of time. Attrition rates have been shown to vary between 7–28% over treatment programs of 10–12 weeks duration. In an exploratory approach Gripeteg et al. (Sweden) [3] sought variables (i.e. anthropometric, psychosocial, psychological, eating behavior) predictive of successful outcomes of VLED based on 267 obese patients who entered the respective program. 148 (84%) females and 73 (81%) males completed the 12-week treatment; average weight loss was approximately 15 kg. Independent pretreatment predictors of relative weight change in females were having more children, lower educational level and better perceived physical health; the respective model explained $R^2 = 12.7\%$. In males, greater relative weight loss was predicted by better self-assessed ambulatory capacity, living with a partner or child and snacking on ice cream more often ($R^2 = 39.4\%$). The initial weight loss measured at week 2 also proved to be an additional independent predictor leading to R^2 of 32.4% and 50.3% in women and men respectively.

Kurth and Ellert (Germany) [4] calculated a correction formula to adjust for self-reported height and weight of German adolescents aged 11–17 years while taking body image into account. The German National Health Interview and Examination Survey for Children and Adolescents formed the data set; the adolescents had been measured and weighed using a standardized procedure. In accordance with previous studies, the self-reported anthropometric data resulted in an underestimation of overweight and obesity prevalence rates. Girls who considered themselves much too fat or too fat and boys who considered themselves as much too fat underestimated their BMI. The respective formula can be used for current studies in Germany; the correction procedure can also be transferred to studies in other countries, if a parallel validation study is performed to assess both subjective and objective BMI and body image.

Regional variation in adipose tissue lipoprotein lipase (AT-LPL) activity, a key regulator of lipid storage, has been hypothesized to account for the shift from a gluteo-femoral to an abdominal body fat distribution occurring during the transition to menopause. Tessier et al. (Canada) [5] examined the effect of walking on AT-LPL activity in 16 late pre- and 14 early post-menopausal moderately obese women who participated in a 16-week program with three 45-min walking sessions per week at 60% heart rate reserve. In this carefully designed study, abdominal and femoral AT-LPL activity and expression, fasting lipid-lipoprotein profile, body composition and cardiorespiratory fitness were measured before and after the intervention. At baseline the two groups did not differ with respect to anthropometry, body composition, estimated O_2max and regional fat cell weight. Body weight loss was significantly higher in pre- than in postmenopausal women. AT-LPL activity adjusted for age and BMI and its expression in the femoral fat depot decreased similarly in response to the walking program, regardless of menopausal status. In contrast, no change was observed in the abdominal fat depot. The reduction in femoral AT-LPL activity did not lead to a more deleterious lipid-lipoprotein profile.

Katulanda and coworkers (Sri Lanka) [6] compared the distance between the lower edge of xiphisternum and the center of the umbilicus (XUD) with other anthropometric measurements in predicting risk factors for cardiovascular disease. The XUD is comparatively easy to determine with low inter- and intra-observer variation. The population-based representative study sample comprised 4,485 adults of Sri Lanka. BMI, waist circumference, waist-to-hip ratio, systolic and diastolic blood pressure, fasting levels of glucose, total cholesterol, low-density lipoprotein cholesterol, high-density lipoprotein cholesterol, triacylglycerols and an oral glucose tolerance test were determined. The area under the curve (AUC) in the receiver operating characteristic curve analysis for XUD in predicting the presence of two or more cardiovascular disease risk factors was 0.62. However, the corresponding AUC values for the other anthropometric variables were higher. The authors thus conclude that usage of XUD over other anthropometric measurements is difficult to justify.

The perception of obesity as a health risk and dissatisfaction with appearance have been shown to be the two main motivating factors for weight loss attempts. Meyer et al. (Switzerland) [7] aimed to develop and evaluate a questionnaire that considers health and appearance as different aspects of motivation for weight loss. For this purpose, two telephone surveys comprising 1,000 and 800 individuals were conducted to obtain representative samples from the German- and French-speaking parts of Switzerland. Data of individuals with a BMI $\geq 25 \text{ kg/m}^2$ were analyzed. The factorial structure of the questionnaire developed to assess motives for weight loss as based on previous studies in the literature was analyzed using exploratory and confirmatory factor analysis. The model obtained was cross-validated with data from a second representative Swiss survey (N = 232); multigroup analyses resulted in the construction of a 24-item questionnaire with items loading on three factors ('health reasons for weight loss', 'appearance in relation to others', 'appearance in relation to oneself') that accounted for 21.6, 16.2 and 15.3% of the total item variance.

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