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Improvement of cardio-metabolic after 8 weeks of weight loss intervention

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Introduction: Lifestyle interventions can prevent the deterioration of impaired glucose tolerance to manifest type 2 diabetes, and also prevent cardiovascular diseases, as it showed many studies (the Finnish Diabetes Prevention Study, Diabetes Prevention Program (DPP), the China Da Qing Diabetes Prevention Study, etc.) Therefore, the aim of our study was to compare the effect of intensified life style intervention on cardiometabolic parameters.

Methods: It is ongoing randomized interventional clinical study (NCT02325804) focused on reduction of body weight/fat. Intervention: hypocaloric diet (30% restriction of calories) and physical activity 150minutes/week. Before and after 8 weeks of intervention, all patients underwent complete medical examination (measurement of physical fitness, resting metabolic rate (RMR), body composition analysis, oral glucose tolerance test, parameters of lipid metabolism, and other cardiometabolic risk factors).

Results: So far, 39 patients finished the intervention. The average reduction of body weight was 6, 8+4, 9kg (0-15kg; $p=0.0006$), accompanied with significant reduction of body fat percentage ($p\leq 0.0001$), amount of fat mass ($p=0.03$), waist circumference ($p=0.02$). Amount of lean mass and RMR remained unchanged. Her rate ($p=0.02$), systolic and diastolic blood pressure was reduced ($p=0.01$ $p=0.02$ resp.) as well as insulin sensitivity were improved. Lipid parameters also changed cholesterol, LDL decreased ($p=0.05$, $p=0.04$ resp.), while triglycerides showed tendency to decrease ($p=0.055$). Liver function improved, alanine aminotransferase (ALT) were reduced ($p=0.01$). Physical fitness significantly improved (as measure VO_2 max ($p=0.02$)).

Conclusion: Results of our study are in line of previous results about beneficial effect of intensive life style changes on reduction of cardiometabolic risk factors and improvement of liver function.

Biography

B Bajer is graduated at Comenius University, Medical Faculty - General Medicine, gained MD title in 2013. He is the owner of Center of Nutrition and Sport (from 2013), where he devotes to diagnostics of physical and psychological state of clients (bioimpedance on Biospace Inbody 230, caliperometry, antropometry, blood measurements etc.). He is PhD student working for Slovak Academy of Science, Biomedical Center - Experimental Endocrinology with thesis - impact of dietotherapy and physical activity on cardiometabolic risk factors. At the moment, he is in his final year of study. His occupation is nutrition and sport endocrinology. He is part of new medical multidisciplinary medical team of Bariatric Surgery in Trnava Hospital (from 2016). He acts as a Lecturer of Physiology and Pathophysiology for students of General Medicine on Slovak Health University in Bratislava and Dietology for Private Health School in Trnava for physiotherapists and clinical nurses. As a seminary Teacher, he acts for wide spectrum of people from pharmacists to mentally, socially and physically handiceped kids, in Slovakia and Czech republic. He is the Head Nutrition Expert for Beiersdorf /Nivea CZ and SK (externally).

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