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IZVODI SAOPŠTENJA ABSTRACTS



BODY WEIGHT REDUCTION RELATIONSHIP TO INSULIN RESISTANCE

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Introduction: Obesity is characterized by insulin resistance and positive influence of the body weight reduction on the insulin sensitivity. The aim of this study was to discover the influence of insignificant body weight reduction on insulin sensitivity.

Materials and methods: The sample comprised 28 women with mean age 26.14 ± 7.29 yrs. The mean values of the following parameters were determined: body weight (BW), BMI, waist circumference (W), blood glucose (G), insulin levels (I) and HOMA index = $G^2/22.5$ (H), before and 1 year after the continuous diet regimen.

Results: Mean BW values were 103.29 ± 18.64 kg, and reduced to 93.07 ± 18.33 kg. The difference of 10.21 ± 6.24 kg showed mean $9.91 \pm 6.07\%$ reduction of the BW. Mean BMI values were 38.57 ± 6.9 kg/m² and reduced to 35.09 ± 6.8 kg/m². The difference was 3.47 ± 2.17 kg/m² and indicated $9.05 \pm 5.74\%$ BMI reduction. W reduced from 112.86 ± 14.23 cm to 104.21 ± 14.13 cm. The difference was 8.64 ± 4.4 cm and indicated $7.66 \pm 4\%$ W reduction. BW, BMI and W changes were not significant ($p > 0.05$). G levels reduced from 5.96 ± 1.05 mmol/l to 5.06 ± 0.7 mmol/l, with mean reduction of 1.01 ± 0.09 mmol/l ($13.79 \pm 15.1\%$) of the start value ($p < 0.013$). I values 31.44 ± 12.18 μ U/ml were reduced to 16.68 ± 6.5 μ U/ml, with difference of 14.76 ± 16.32 μ U/ml ($44.03 \pm 20.85\%$) of the start value and H value 8.34 ± 3.33 reduced to 3.77 ± 1.55 , for the difference of 4.57 ± 3.08 , $51.84 \pm 20.32\%$ of the pretreatment value ($p < 0.0001$).

Conclusion: This study concluded that insignificant body weight reduction improved glucose metabolism, reduced insulin levels and especially increased significantly insulin sensitivity. It is very important that insignificant body weight reduction reduced insulin resistance and consecutive risk of diabetes and cardiovascular complications.

Key words: obesity, insulin resistance, body weight reduction