

Differences in Weight and Waist Circumference Reduction between People of Different HOMA-IR among Clinically Healthy Overweight and Obese Individuals

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Introduction. The task of primary care is to identify people who are at increased cardiovascular diseases risk and decrease the amendable risk factors by introducing lifestyle changes. Motivating clinically healthy overweight and obese individuals to bring lifestyle behavioural changes prior to an apparent disease is still a challenge. Discovering and discussing any cardiovascular diseases risk associated changes, such as HOMA-IR value, could be used as an argument to start lifestyle changes and lose weight and decrease waist circumference.

Aim. The aim of the study is to determine whether people with HOMA-IR ≥ 2 reduce weight and waist circumference more effectively than those with HOMA-IR < 2 .

Material and methods. A prospective observational study in Rīga, Latvia included 73 clinically healthy individuals having body mass index ≥ 25 m²/kg and below 40 m²/kg in the age group 30–45 that visited primary care physician. Individuals were tested and consulted for HOMA-IR and were advised to decrease weight and waist circumference by at least 5% within a year. Weight and waist circumference differences between the two groups were estimated: those with HOMA-IR ≥ 2 (n = 52) and HOMA-IR < 2 (n = 21). A paired t test was employed to compare the change within subject and an independent t test to compare the means of the two groups.

Results. Unexpected statistically significant differences in weight reduction between the groups were observed: weight reduction in HOMA-IR ≥ 2 group was less than that in HOMA < 2 group: mean difference 2.35 (95% CI = 0.12 to 4.6 kg, p = 0.039). A statistically significant paired mean difference was observed regarding waist circumference reduction in both groups: individuals with HOMA-IR ≥ 2 (2.3 cm, 95% CI = 0.76, 3.86; p = 0.004) and HOMA-IR < 2 (4.0 cm, 95% CI = 1.65, 6.30; p = 0.002). No statistically significant paired mean difference was observed regarding weight reduction.

Conclusions. The respective study revealed that clinically healthy overweight and obese individuals residing in Rīga, Latvia with HOMA-IR ≥ 2 do not reduce weight or waist circumference more effectively than those with HOMA-IR below 2. Further research is required to understand what the motivation for behavioural changes in clinically healthy overweight and obese individuals could be.