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| **Supplemental table****Table 1.** Metabolic healthy status

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| Criteria | Cardiovascular risk factors (CRF) | MHO | MUO |
|  | Hypertension: SBP ≥ 95th percentile or DBP ≥ 95th percentile Dyslipidemia:TG ≥ 95th percentile or HDL-C < 5th percentile Impaired fasting glucose ≥ 5.6 mmol/L  | No CRF | < 2 of the CRF |

MHO - Metabolically healthy Obesity; MUO - Metabolically unhealthy Obesity; SBP - Systolic blood pressure; DBP - diastolic blood pressure; TG - Triglycerides; HDL-C High density cholesterol**Table 2.** Anthropometric and biochemical characteristics of normal weight controls, MHO and MUO children |
|  | **Normal weight controls** | **MHO**  | **MUO**  | **RD (95% CI)** | ***P* valuea** | ***P* valueᵇ**  |
| n (%) | 212 (46.0) | 173 (38.0) | 73 (16.0) |  |  |  |
| **Baseline characteristics, anthropometric** |
| Age, years | 11.1 ± 2.98 | 11.2 ± 2.64 | 11.4 ± 2.84 | 0.20 (0.03-0.98) | .610 | .785 |
| Male sex, n (%) | 109 (51) | 96 (55) | 34 (49) |  | .496 | .496 |
| waist to height ratio, cm | 0.42 ± 0.03 | 0.54 (0.51-0.58) | 0.56 (0.53-0.61)  | 0.02 (0.00-0.04) | <.001 | .004 |
| Neck circumference, SDS | -0.12 ± 0.78 | 1.37 (0.95-1.72) | 1.54 (1.04-2.10) | 0.17 (0.02-0.41) | <.001 | .006 |
| **Biochemical parameters** |
| Total-cholesterol, mmol/L | 4.04 (3.68-4.52) | 4.11 (3.71-4.65) | 4.37 (3.88-4.99) |  0.26 (0.01-0.45) | .043 | .039 |
| LDL-C, mmol/L | 2.23 (1.87-2.64) | 2.43 (2.05-2.84) | 2.73 (2.26-3.17) |  0.30 (0.08-0.46) | <.001 | .004 |
| Fasting insulin, μU/L | 7.86 (5.55-10.3) | 14.2 (11.0-16.8) | 17.3 (13.0-20.3) |  3.10 (4.42-9.64) | <.001 | <.001 |
| HbA1C, % | 5.02 ± 0.31 | 5.08 ± 0.36 | 5.12 (4.91-5.30) | 0.04 (0.02- 0.13) | .033 | .379 |
| Haemoglobin, g/dL | 13.07 ± 0.94 | 12.8 ±1.02 | 13.1 (12.6-13.5) | 0.30 (0.00-0.50) | .210 | .429 |
| Red blood cell, 10^12 | 4.70 ± 0.33 | 4.72 ± 1.56 | 4.76 (4.54-4.95) | 0.04 (0.04-0.13) | .131 | .078 |
| Hematocrit, % | 0.38 (0.36-0.39) | 0.37 (0.36-0.40) | 0.38 (0.37-0.40) | 0.01 (0.00-0.01) | .561 | .339 |
| White blood cell, 10^9L | 5.74 ± 1.55 | 6.45 ± 1.56 | 6.60 (5.80-7.60) | 0.15 (0.79-0.99) | <0.001 | .133 |
| Platelet, 10^9L | 279.2 ± 58.8 | 274 (248-315) | 286 (264-331) | 12.0 (2.99-32.0) | .040 | .052 |
| Neutrophils, 10^9L | 2.48 (2.01-3.12) | 3.22 (2.56-3.96) | 3.65 (2.44-4.31) |  0.43 (0.12-0.63) | .002 | .173 |
| Monocyte, 10^9L | 0.49 (0.38-0.57) | 0.51 (0.42-0.63) | 0.50 (0.42-0.62) | 0.01 (0.12-0.63) | .012 | .907 |
| Alkaline phosphatase, U/l | 3.65 ± 1.46 | 4.01 (3.23-4.62) | 4.40 (2.59-5.02) | 0.39 (0.23- 0.54) | .029 | .442 |
| Total protein (g/l) | 68.1 ± 4.30 | 70.4 ± 3.53 | 70.7 (68.2-72.6) | 0.30 (0.30-1.40) | .002 | .264 |
| Creatine kinase, µkat/l | 1.99 (1.55-2.71) | 1.89 (1.49-2.45) | 1.79 (1.55-2.49) | 0.18 (0.10- 0.28) | .108 | .864 |
| Lpa-Lipoprotein-a, g/l | 0.09 (0.04-0.29) | 0.10 (0.03-0.31) | 0.07 (0.03-0.20) | 0.03 (0.00- 0.04) | .517 | .211 |
| Interleukin 6, pg ml | 1.76 (1.50-3.07) | 1.50 (1.50-2.78) | 1.86 (1.50-3.01) | 0.36 (0.01- 0.50) | .723 | .325 |
| Testosterone, nmol/l | 0.40 (0.08-2.28) | 0.39 (0.08-0.98) | 0.37 (0.11-1.32) | 0.02 (0.08-0.22) | .968 | .931 |
| Estradiol, pmol/l | 35.8(18.4-115.5) | 18.4 (17.0-94.4) | 41.6 (16.4-86.8) | 23.2 (0.02-21.1) | .050 | .042 |
| Shbg, nmol/l | 77.5 (47.3-116) | 92.1(60.5-130) | 78.2 (42.2-117) | 13.9 (27.2-39.0) | .123 | .158 |

Data are presented as mean ± SD or median (interquartile range), item risk difference (RD) between the MHO and MUO groups, confidence interval (CI). Group comparisons were analyzed by a Mann-Whitney-Wilcoxon test or t-test depending on the distribution of data. ᵃP values for Normal weight vs. MHO vs. MUO. bP values for MHO vs. MUO. Abbreviations: MHO, metabolically healthy obesity, MUO, metabolically unhealthy obesity, LDL-C low high density lipoprotein cholesterol, ALT alanine aminotransferase, AST aspartate aminotransferase, GGT gammaglutamyltransferase, HbA1c glycated hemoglobin A1c, Lp(a) Lipoprotein-a, hs-CRP high sensitivity C-reactive protein.