|  |  |  |
| --- | --- | --- |
| Parameters | Untreated mice on StD  Female Male  | Gender difference*P* value  |
|  | **mean ± SD (n)** | **mean ± SD (n)** |  |
| Body weight (BW, g)T0 BWT6 BWΔBW = T6 -T0 *C*BW = ΔBW/T0Total cholesterol (TC, mg/dL)T0 TCT6 TCΔTC = T6-T0*C*TC = ΔTC/T0High-density lipoprotein cholesterol (HDL, mg/dL)T0 HDLT6 HDLΔHDL = T6-T0*C*HDL = ΔHDL/T0Blood glucose (Glu, mg/dL)T0 GluT6 GluΔGlu = T6-T0*C*Glu = ΔGlu/T0Triglycerides (TG, mg/dL)T0 TGT6 TGΔTG = T6-T0*C*TG = ΔTG/T0 |   18.87 ± 0.92 (5) 24.96 ± 0.65 (5) 6.09 ± 1.13 (5) 0.33 ± 0.08 (5)  77.60 ± 10.81 (5) 59.20 ± 7.69 (5) -18.40 ± 4.56 (5) -0.24 ± 0.04 (5)  66.40 ± 23.56 (5) 41.60 ± 6.07 (5) -24.80 ± 24.85 (5) -0.29 ± 0.31 (5) 118.80 ± 18.85 (5) 136.00 ± 32.50 (5) 17.20 ± 30.33 (5) 0.20 ± 0.49 (5) 79.40 ± 26.55 (5) 32.40 ± 5.73 (5) -47.00 ± 22.91 (5) -0.55 ± 0.16 (5) |  21.07 ± 0.55 (5) 31.07 ± 2.27 (5) 10.00 ± 1.87 (5) 0.47 ± 0.08 (5) 105.20 ± 28.83 (5) 72.80 ± 6.57 (5) -32.40 ± 30.41 (5) -0.27 ± 0.21 (5) 87.80 ± 15.21 (5) 54.40 ± 6.07 (5) -33.40 ± 15.39 (5) -0.37 ± 0.12 (5) 154.00 ± 32.74 (5) 243.20 ± 43.58 (5) 89.20 ± 45.53 (5) 0.61 ± 0.35 (5) 68.00 ± 14.51 (5) 43.20 ± 11.45 (5) -24.80 ± 11.03 (5) -0.36 ± 0.12 (5) | 0.0039 \*\*0.0244 \*0.33850.76170.52910.60510.0410 \*0.16640.08670.0664 |

**Table S1.** **Mean** **absolute and relative changes in body weight and biochemical parameters among healthy C57BL/6 mice after six months on StD, by gender**

StD, standard diet; SD, standard deviation; n, number of animals; T0, before StD feeding; T6, after six months on StD; Δ, absolute change; *C*, relative change; *P* values were calculated using the unpaired two-tailed Student’s t-test. Asterisks indicate statistical significance.

****

**Figure S1. Trends in body weight and blood biochemistry among C57BL/6 mice, which include both males and females, over four months on HCD (the MetS induction phase) or StD.** Means and standard deviations of body weight, total cholesterol, high-density lipoprotein (HDL) cholesterol, glucose and triglycerides for both male and female (F+M) mice on high calorie diet (HCD) or standard diet (StD), before (T0) and after one (T1), two (T2), three (T3) and four (T4) months feeding on HCD or StD.

**Table 2S.** C**hanges of body weight and blood biochemical parameters of treated mice, by treatment group and gender.**

|  |  |
| --- | --- |
| **Parameters** | **Mineral water-treated mice** **SCMmw BSMmw lmw**  **Female (n) Male (n) Female (n) Male (n) Female (n) Male (n)** |
| **mean ± SD** |
| **Body weight (BW, g)****T4 BW****T6 BW****Total cholesterol (TC, mg/dL)****T4 TC****T6 TC****High-density lipoprotein cholesterol (HDL, mg/dL)****T4 HDLC****T6 HDLC****Blood glucose (Glu, mg/dL)****T4 Glu****T6 Glu****Triglycerides (TG, mg/dL)****T4 TG****T6 TG** |  31.63 ± 4.27 (8) 26.51 ± 0.73 (7)  223.50 ± 28.08 (8) 80.57 ± 9.64 (7)119.00 ± 18.24 (8) 49.14 ± 4.45 (7) 161.00 ± 23.40 (8)188.57 ± 32.86 (7) 46.50 ± 13.17 (8) 39.43 ± 16.88 (7) |  40.33 ± 5.16 (8) 32.71 ± 2.29 (8) 285.14 ± 31.81 (7) 99.00 ± 11.66 (8)140.57 ± 7.81 (7) 63.00 ± 7.33 (8) 235.43 ± 56.49 (7)203.00 ± 54.88 (8) 58.29 ± 18.16 (7) 63.50 ± 8.67 (8)  |  29.46 ± 6.03 (8) 24.89 ± 1.40 (8)  207.50 ± 46.80 (8) 78.00 ± 18.39 (8)  107.50 ± 21.85 (8) 45.50 ± 8.26 (8)  148.00 ± 35.39 (8) 162.00 ± 30.84 (8)  44.50 ± 7.540 (8) 28.25 ± 3.45 (8) |  40.07 ± 4.43 (8) 33.47 ± 2.49 (8)  253.50 ± 43.45 (8) 89.00 ± 7.63 (8)  132.50 ± 15.33 (8) 58.50 ± 5.63 (8)  244.50 ± 68.17 (8) 171.50 ± 24.61 (8)  50.50 ± 22.52 (8) 49.00 ± 15.38 (8)  |  32.39 ± 6.85 (8) 25.90 ± 1.99 (8) 195.00 ± 40.16 (8) 87.00 ± 7.93 (8) 114.00 ± 14.81 (8) 51.00 ± 8.75 (8) 176.00 ± 23.13 (8) 163.50 ± 33.36 (8) 49.00 ± 7.01 (8) 30.00 ± 11.51 (8) |  42.51 ± 4.59 (8) 36.12 ± 4.22 (8) 285.50 ± 38.66 (8) 101.00 ± 16.11 (8)  148.00 ± 8.00 (8) 71.50 ± 6.91 (8) 259.00 ± 46.54 (8) 214.00 ± 35.97 (8)  54.00 ± 9.56 (8) 36.00 ± 8.28 (8) |

SCMmw, sulphate-, calcium- and magnesium-rich mineral water; BSMmw, bicarbonate-, sulphate- and magnesium-rich mineral water; lmw, light mineral water; n, number of animals; SD, standard deviation; T4, before any treatment; T6, after two months of treatment.

**Table 2S.** *Cont.*

|  |  |
| --- | --- |
| **Parameters** | **Mineral water-treated mice**  **BCmw BCPMmw mwMix** **Female (n) Male (n) Female (n) Male (n) Female (n) Male (n)** |
| **mean ± SD** |
| **Body weight (BW, g)****T4 BW****T6 BW****Total cholesterol (TC, mg/dL)****T4 TC****T6 TC****High-density lipoprotein cholesterol (HDL, mg/dL)****T4 HDLC****T6 HDLC****Blood glucose (Glu, mg/dL)****T4 Glu****T6 Glu****Triglycerides (TG, mg/dL)****T4 TG****T6 TG** |  30.68 ± 3.67 (8) 27.32 ± 1.48 (8) 159.50 ± 14.25 (8) 69.00 ± 10.42 (8) 102.00 ± 13.01 (8) 42.00 ± 6.41 (8) 166.00 ± 20.73 (8) 200.00 ± 55.55 (8)  58.00 ± 12.47 (8) 45.50 ± 20.50 (8) |  46.98 ± 3.04 (9) 40.50 ± 2.97 (9)  200.89 ± 60.06 (9) 92.89 ± 15.59 (9) 128.00 ± 38.16 (9) 57.78 ± 7.77 (9)  207.56 ± 35.63 (9) 222.23 ± 34.88 (9)   65.78 ± 28.57 (9) 42.67 ± 17.20 (9) |  32.68 ± 4.42 (8) 28.15 ± 2.76 (8)   152.57 ± 16.24 (7) 75.00 ± 4.66 (8) 95.43 ± 12.31 (7) 45.50 ± 2.98 (8) 161.71 ± 26.42 (7) 217.00 ± 22.90 (8)   44.57 ± 9.36 (7) 32.50 ± 11.80 (8)  |  45.46 ± 3.54 (9) 37.80 ± 3.07 (9)   203.11 ± 58.12 (9) 103.11 ± 10.73 (9) 121.33 ± 29.92 (9) 65.33 ± 2.83 (9)  219.11 ± 37.19 (9) 251.11 ± 39.38 (9)   46.22 ± 9.67 (9) 63.55 ± 18.16 (9) |  34.71 ± 5.67 (8) 29.21 ± 4.07 (8)  145.50 ± 19.94 (8) 87.00 ± 12.05 (8)  89.00 ± 12.05 (8) 46.00 ± 6.05 (8) 162.50 ± 22.42 (8) 257.50 ± 57.09 (8)   40.50 ± 8.12 (8) 79.50 ± 33.36 (8)  |  44.10 ± 3.74 (9) 38.70 ± 4.95 (9)  213.56 ± 44.58 (9) 98.23 ± 21.74 (9) 125.11 ± 19.21 (9) 60.00 ± 7.75 (9) 204.00 ± 36.55 (9) 250.67 ± 63.28 (9)  54.67 ± 14.97 (9) 60.00 ± 24.00 (9) |

BCmw, bicarbonate- and calcium-rich mineral water; BCPMmw, bicarbonate-, calcium, potassium- and magnesium-rich mineral water; mwMix, alternation of natural mineral waters; n, number of animals; SD, standard deviation; T4, before any treatment; T6, after two months of treatment.

**Table 2S.** *Cont.*

|  |  |
| --- | --- |
| **Parameters** | **tap water-treated mice (control group)** **tapw**  **Female (n) Male (n)**  |
| **mean ± SD** |
| **Body weight (BW, g)****T4 BW****T6 BW****Total cholesterol (TC, mg/dL)****T4 TC****T6 TC****High-density lipoprotein cholesterol (HDL, mg/dL)****T4 HDLC****T6 HDLC****Blood glucose (Glu, mg/dL)****T4 Glu****T6 Glu****Triglycerides (TG, mg/dL)****T4 TG****T6 TG** |  35.68 ± 4.19 (7) 30.36 ± 2.65 (7)152.57 ± 10.18 (7) 85.43 ± 20.68 (7)   89.14 ± 8.55 (7) 49.57 ± 12.16 (7) 163.43 ± 29.88 (7)234.43 ± 73.82 (7)   46.86 ± 6.82 (7) 47.29 ± 15.17 (7)  |  46.65 ± 3.77 (9) 39.73 ± 3.67 (9)206.67 ± 55.61 (9) 108.00 ± 26.46 (9) 123.11 ± 34.22 (9) 72.00 ± 12.49 (9) 240.00 ± 60.07 (9)258.67 ± 69.74 (9)   47.55 ± 7.33 (9) 55.11 ± 29.51 (9) |

Tapw, low mineral content tap water; n, number of animals; SD, standard deviation; T4, before any treatment; T6, after two months of treatment.