**Supplementary Table S1.** Data of group “REF” compared to group NOP-CTRL is shown

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | PND(d) | NOP-CTRL(n=10) | REF(n=10) | *P* value (MW-Test) |
| Body weight (g) | 2 | 7.28 ± 0.18 | 7.23 ± 0.18 | 0.534 |
| 12 | 32.5 ± 0.7 | 32.1 ± 0.5 | 0.425 |
| 19 | 52.0 ± 1.2 | 52.2 ± 0.6 | 0.616 |
| 40 |  174 ± 4 |  175 ± 2 | 0.796 |
| 89 |  409 ± 10 |  406 ± 8 | 0.631 |
| Body weight gain (g) | 2 - 19 | 44.7 ± 1.0 | 43.7 ± 0.9 | 0.436 |
| 19 - 40 |  122 ± 4 |  124 ± 2 | 0.645 |
| 40 - 89 |  234 ± 7 |  224 ± 7 | 0.362 |
| Body weight gain per day (g/d) | 2 - 19 | 2.63 ± 0.06 | 2.57 ± 0.05 | 0.436 |
| 19 - 40 | 5.82 ± 0.18 | 5.90 ± 0.10 | 0.645 |
| 40 - 89 | 4.69 ± 0.14 | 4.49 ± 0.13 | 0.362 |
| Body length (cm) | 3 | 5.74 ± 0.07 | 5.92 ± 0.04 | 0.803 |
| 12 | 8.96 ± 0.18 | 8.61 ± 0.07 | 0.542 |
| 19 | 10.9 ± 0.1 | 11.0 ± 0.1 | 0.694 |
| 40 | 17.6 ± 0.2 | 17.8 ± 0.1 | 0.779 |
| 92 | 23.2 ± 0.2 | 23.4 ± 0.1 | 0.815 |
| Length growth (cm) | 2 - 19 | 1.92 ± 0.15 | 1.68 ± 0.15 | 0.322 |
| 19 - 40 | 6.72 ± 0.15 | 6.83 ± 0.20 | 0.542 |
| 40 - 89 | 5.59 ± 0.12 | 5.48 ± 0.12 | 0.869 |
| Length growth per day (g/d) | 2 - 19 | 0.11 ± 0.01 | 0.10 ± 0.01 | 0.322 |
| 19 - 40 | 0.32 ± 0.01 | 0.33 ± 0.01 | 0.542 |
| 40 - 89 | 0.11 ± 0.01 | 0.11 ± 0.01 | 0.869 |
| BMI (g/cm²) | 2 | 0.22 ± 0.01 | 0.21 ± 0.01 | 0.753 |
| 12 | 0.41 ± 0.01 | 0.43 ± 0.01 | 0.105 |
| 19 | 0.44 ± 0.01 | 0.44 ± 0.01 | 0.853 |
| 40 | 0.56 ± 0.01 | 0.55 ± 0.01 | 0.631 |
| 92 | 0.76 ± 0.01 | 0.74 ± 0.01 | 0.739 |
| Food intake (g/d) | 38 | 19.4 ± 0.7 | 19.8 ± 1.6 | 0.203 |
| 88 | 23.4 ± 1.0 | 23.7 ± 1.1 | 0.618 |
| Food intake / BW (g/kg/d) | 38 |  110 ± 7 |  116 ± 8 | 0.798 |
| 88 | 55.7 ± 3.1 | 63.0 ± 2.0 | 0.161 |
| Visceral fat mass (g)   | 40 | 2.86 ± 0.20 | 2.77 ± 0.24 | 0.985 |
| 92 | 17.4 ± 0.9 | 15.6 ± 0.6 | 0.162 |
| Visceral fat mass per body weight (g/kg)  | 40 | 17.3 ± 1.5 | 15.2 ± 1.2 | 0.481 |
| 92 | 43.3 ± 2.4 | 39.0 ± 1.2 | 0.182 |
| Subcutaneous fat mass (g)   | 40 | 1.78 ± 0.15 | 1.68 ± 0.15 | 0.649 |
| 92 | 3.70 ± 0.57 | 2.91 ± 0.51 | 0.315 |
| Subcutaneous fat mass per body weight (g/kg)  | 40 | 10.1 ± 0.8 |  9.3 ± 0.8 | 0.546 |
| 92 |  9.1 ± 1.4 |  7.4 ± 1.3 | 0.385 |
| Total fat mass (g)   | 40 | 4.63 ± 0.25 | 4.45 ± 0.32 | 0.654 |
| 92 | 20.8 ± 0.9 | 18.5 ± 0.9 | 0.085 |
| Total fat mass per body weight (g/kg)  | 40 | 26.3 ± 1.3 | 24.6 ± 1.5 | 0.421 |
| 92 | 51.9 ± 2.7 | 46.4 ± 2.0 | 0.060 |
| Ratio visceral / subcutaneous fat mass (g/g)   | 40 | 1.70 ± 0.18 | 1.53 ± 0.14 | 0.623 |
| 92 | 6.65 ± 1.34 | 7.72 ± 1.62 | 0.535 |
| Gain of visceral fat mass (g) | 40 - 92 | 15.5 ± 1.21 | 12.8 ± 0.66 | 0.089 |
| Gain of visceral fat mass (g/kg) | 40 - 92 | 37.7 ± 2.4 | 32.0 ± 1.5 | 0.105 |
| Gain of subcutaneous fat mass (g) | 40 - 92 | 1.60 ± 0.43 | 1.23 ± 0.44 | 0.684 |
| Gain of subcutaneous fat mass (g/kg) | 40 - 92 | 4.04 ± 1.1 | 3.13 ± 1.1 | 0.631 |
| Gain of total fat mass (g) | 40 - 92 | 17.1 ± 1.16 | 14.0 ± 0.80 | 0.063 |
| Gain of total fat mass (g/kg) | 40 - 92 | 41.7 ± 2.4 | 35.1 ± 1.9 | 0.105 |
| Mesenteric fat weight (g) | 98 | 4.66 ± 0.27 | 3.69 ± 0.30 | 0.022 |
| Mesenteric fat weight (g/kg body weight) | 98 | 11.9 ± 0.6 |  9.6 ± 0.8 | 0.028 |
| Retroperitoneal fat weight (g) | 98 | 11.3 ± 1.0 |  8.3 ± 0.7 | 0.034 |
| Retroperitoneal fat weight (g/kg body weight) | 98 | 28.1 ± 2.2 | 21.7 ± 1.9 | 0.052 |
| Epididymal fat weight (g) | 98 | 12.3 ± 0.7 | 11.2 ± 0.5 | 0.400 |
| Epididymal fat weight (g/kg body weight) | 98 | 31.4 ± 1.7 | 29.1 ± 1.1 | 0.356 |
| Liver weight (g) | 98 | **10.4 ± 0.4** |  **9.1 ± 0.2** | **0.009** |
| Liver weight (g/kg body weight ) | 98 | 25.9 ± 0.6 | 23.8 ± 0.5 | 0.029 |
| Kidney weight (left, g) | 98 | 1.20 ± 0.05 | 1.13 ± 0.02 | 0.255 |
| Kidney weight (right, g) | 98 | 1.25 ± 0.04 | 1.17 ± 0.03 | 0.100 |
| Kidney weight (both, g/kg body weight ) | 98 | 6.14 ± 0.20 | 5.99 ± 0.13 | 0.529 |
| Glucose (mmol/l) | 42 | 8.98 ± 0.25 | 8.80 ± 0.32 | 0.659 |
| 96 | 8.67 ± 0.12 | 8.01 ± 0.22 | 0.037 |
| Insulin (mU/l) | 42 | 0.99 ± 0.21 | 0.77 ± 0.09 | 0.515 |
| 96 | **1.57 ± 0.28** | **0.74 ± 0.10** | **0.006** |
| Leptin | 42 | 2.79 ± 0.30 | 2.31 ± 0.43 | 0.417 |
| 96 | 7.70 ± 1.21 | 4.93 ± 0.61 | 0.101 |
| HOMA-IR | 42 | 0.41 ± 0.10 | 0.31 ± 0.04 | 0.633 |
| 96 | **0.60 ± 0.11** | **0.23 ± 0.03** | **<0.001** |
| HbA1c (mM/M) | 42 | 13.6 ± 0.4 | 13.5 ± 0.3 | 0.984 |
| 96 | 19.4 ± 0.5 | 20.0 ± 0.2 | 0.523 |
| Corticosterone (ng/ml) | 42 |  521 ± 57 |  665 ± 48 | 0.108 |
| 96 |  646 ± 38 |  637 ± 59 | 0.825 |
| 11-DHC (ng/ml) | 42 | 27.8 ± 2.5 | 31.8 ± 2.1 | 0.211 |
| 96 | 21.5 ± 1.7 | 21.8 ± 1.7 | 0.825 |
| C/11DHC (ng/ng) | 42 | 18.9 ± 1.5 | 21.0 ± 0.9 | 0.278 |
| 96 | 30.6 ± 1.3 | 29.3 ± 1.9 | 0.661 |
| Total Cholesterol (mmol/l) | 42 | 2.01 ± 0.12 | 2.12 ± 0.10 | 0.546 |
| 96 | 1.70 ± 0.08 | 1.48 ± 0.10 | 0.123 |
| HDL (%TC) | 42 | 76.9 ± 2.2 | 78.7 ± 1.5 | 0.387 |
| 96 | **64.1 ± 3.6** | **78.2 ± 2.0** | **0.009** |
| Triglycerides (mmol/l) | 42 | 1.38 ± 0.10 | 1.15 ± 0.08 | 0.094 |
| 96 | 1.18 ± 0.07 | 0.99 ± 0.07 | 0.076 |
| Adiponectin (µg/ml) | 42 | 30.2 ± 4.0 | 21.9 ± 2.1 | 0.133 |
| 96 | 24.7 ± 2.2 | 24.4 ± 1.8 | 0.971 |
| Hemoglobin (mmol/l) | 42 | 8.71 ± 0.10 | 8.89 ± 0.09 | 0.189 |
| 96 | 9.86 ± 0.05 | 9.74 ± 0.10 | 0.160 |
| Total Protein (g/l) | 42 | 58.5 ± 0.6 | 59.8 ± 0.8 | 0.243 |
| 96 | 63.8 ± 0.6 | 66.2 ± 1.3 | 0.305 |
| Gene expression: Muscle [normalized to RPS29; relative units (RU)] |
| MAP3K12 | 98 | 1.00 ± 0.07 | 1.16 ± 0.10 | 0.353 |
| HSPA1 | 98 | 1.00 ± 0.15 | 0.94 ± 0.14 | 0.796 |
| NDUFA5 | 98 | 1.00 ± 0.03 | 1.04 ± 0.05 | 0.579 |
| UCP2 | 98 | 1.00 ± 0.10 | 1.21 ± 0.11 | 0.248 |
| UCP3 | 98 | 1.00 ± 0.11 | 0.95 ± 0.08 | 0.400 |
| Gene expression: Liver [normalized to RPS29; relative units (RU)] |
| PPARα | 98 | 1.00 ± 0.07 | 1.01 ± 0.05 | 0.549 |
| IGF-1 | 98 | 1.00 ± 0.05 | 1.00 ± 0.05 | 0.842 |
| IGF-2 | 98 | 1.00 ± 0.08 | 1.02 ± 0.13 | 0.842 |
| IGFBP-3 | 98 | 1.00 ± 0.05 | 1.16 ± 0.06 | 0.054 |

PND, postnatal day; NOP, offspring of no operation (control) dams; CTRL, infant formula based “normal matrix” control diet; “REF”, background reference group, this group was used as comparator to healthy control rats (group NOP-CTRL) exclusively to illustrate the metabolic effects of WSD in healthy rat offspring. Group REF was neither compared to other groups nor used as a statistical control group.