Appendix 1. Bronchoalveolar lavage fluid and complete blood cell counts of male rats following acute O3exposure.

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| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF cell counts, cells/ml** | | | | |
| **Total Cells** | **Eosinophils$** | **Lymphocytes** | **Macrophages$** | **Neutrophils** |
| **Control** | Air | 67353 ± 5100.1 | 2551 ± 513.3 | 715 ± 80.7 | 54617 ± 4747.6 | 6886 ± 612.2 |
| 0.8 ppm O3 | 62077 ± 3691.7 | 7049 ± 1331.9\* | 896 ± 115.2 | 43474 ± 2393.6\* | 7631 ± 1356.9 |
| **High Fructose** | Air | 67023 ± 3189.6+ | 11032 ± 716.0 | 486 ± 50.5+ | 48945 ± 1939.7+ | 4641.6± 1360 + |
| 0.8 ppm O3 | 64866 ± 2841.7+ | 15363 ± 543.2\* | 574 ± 88.7+ | 41261 ± 1405.2\*+ | 5065 ± 494.0+ |
| **High Fat** | Air | 67186 ± 4775.8+ | 17037 ± 2130.3+ | 413 ± 122.1+ | 44855 ± 2105.3+ | 3223 ± 515.6+ |
| 0.8 ppm O3 | 72434 ± 2584.8+ | 22358 ± 1351.9\*+ | 593 ± 95.8+ | 43591 ± 2015.8\*+ | 3748 ± 388.6+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF Protein Markers** | | | | |
| **GGT (U/l)** | **LDH (U/l)** | **Albumin (µg/ml)** | **NAG (U/l)** | **Protein (µg/ml)** |
| **Control** | Air | 7.94 ± 0.24 | 45.15 ± 3.63 | 11.42 ± 1.35 | 11.39 ± 0.78 | 115.17 ± 6.74 |
| 0.8 ppm O3 | 7.06 ± 0.23\* | 39.59 ± 2.72 | 16.59 ± 1.95\* | 9.90 ± 1.14 | 131.78 ± 10.00 |
| **High Fructose** | Air | 8.15 ± 0.24+ | 36.93 ± 3.17+ | 13.43 ± 1.89+ | 7.60 ± 1.26 | 123.64 ± 12.29+ |
| 0.8 ppm O3 | 7.41 ± 0.14\*+ | 36.68 ± 2.26+ | 19.85 ± 1.70\*+ | 9.35 ± 0.77 | 153.04 ± 11.35+ |
| **High Fat** | Air | 8.01 ± 0.34 | 40.08 ± 2.51+ | 10.55 ± 1.15+ | 8.91 ± 0.98 | 124.26 ± 6.94+ |
| 0.8 ppm O3 | 7.41 ± 0.18 | 45.60 ± 1.50+ | 17.02 ± 1.88\*+ | 9.31 ± 0.90 | 158.46 ± 10.36\*+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: GGT – γ- glutamyl transferase; LDH – lactate dehydrogenase; NAG – N-acetyl glucosaminidase.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 1** | | | |
| **WBC (x106/ml)** | **RBC (x106/ml)** | **HgB (g/dL)** | **Hct (%)** |
| **Control** | Air | 2.46 ± 0.30 | 7.25 ± 0.07 | 13.05 ± 0.26 | 36.48 ± 0.28 |
| 0.8 ppm O3 | 1.48 ± 0.14\* | 7.29 ± 0.11 | 13.31 ± 0.23 | 36.71 ± 0.54 |
| **High Fructose** | Air | 2.37 ± 0.32+ | 7.24 ± 0.13 | 13.03 ± 0.19 | 36.89 ± 0.73 |
| 0.8 ppm O3 | 1.64 ± 0.14\*+ | 7.24 ± 0.08 | 12.96 ± 0.12 | 36.61 ± 0.36 |
| **High Fat** | Air | 2.17 ± 0.19+ | 7.29 ± 0.04 | 12.95 ± 0.21 | 36.33 ± 0.24 |
| 0.8 ppm O3 | 1.56 ± 0.12\*+ | 7.41 ± 0.06 | 13.06 ± 0.13 | 37.03 ± 0.40 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: WBC-white blood cells; RBC-red blood cells; HgB-Hemoglobin; HcT-hematocrit.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 2** | | | | |
| **MCV (fL)** | **MCH**  **(pg/cell)** | **MCHC (g/dL)** | **Platelets (x106/ml)** | **Lymphocyte%** |
| **Control** | Air | 50.32 ± 0.30 | 18.03 ± 0.30 | 35.86 ± 0.73 | 832.5 ± 11.3 | 83.48 ± 0.80 |
| 0.8 ppm O3 | 50.33 ± 0.24 | 18.23 ± 0.26 | 36.34 ± 0.58 | 822.4 ± 22.2 | 79.19 ± 1.45\* |
| **High Fructose** | Air | 51.96 ± 0.35 | 18.01 ± 0.24 | 35.33 ± 0.54 | 787.2 ± 16.1+ | 81.56 ± 2.45 |
| 0.8 ppm O3 | 50.59 ± 0.21 | 17.91 ± 0.17 | 35.40 ± 0.38 | 786.3 ± 15.4+ | 78.40 ± 2.07 |
| **High Fat** | Air | 49.84 ± 0.19 | 17.79 ± 0.23 | 35.71 ± 0.54 | 842.2 ± 8.7 | 82.04 ± 1.39 |
| 0.8 ppm O3 | 49.94 ± 0.17 | 17.62 ± 0.13 | 35.30 ± 0.34 | 850.7 ± 9.2 | 79.22 ± 1.70 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: MCV-mean cell volume; MCH-mean cell hemoglobin; MCHC-mean cell hemoglobin concentration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Glucose and Lipid Profile, mg/dL** | | | | |
| **Cholesterol$** | **Glucose** | **HDL$** | **LDL** | **Triglycerides** |
| **Control** | Air | 61.12 ± 3.83 | 179.07 ± 11.06 | 14.51 ± 0.38 | 7.60 ± 0.47 | 18.10 ± 1.02 |
| 0.8 ppm O3 | 43.02 ± 1.31\* | 166.94 ± 8.10 | 16.17 ± 0.66 | 7.37 ± 0.44 | 25.37 ± 2.22\* |
| **High Fructose** | Air | 49.60 ± 1.71 | 200.61 ± 14.06 | 16.27 ± 0.89 | 6.59 ± 0.65+ | 37.32 ± 3.43+ |
| 0.8 ppm O3 | 52.47 ± 1.98 | 179.13 ± 13.61 | 11.94 ± 0.55 | 5.37 ± 0.23+ | 42.81 ± 3.35+ |
| **High Fat** | Air | 46.31 ± 1.19 | 143.21 ± 8.97+ | 11.30 ± 0.70+ | 4.87 ± 0.37+ | 18.12 ± 0.77+ |
| 0.8 ppm O3 | 50.22 ± 1.41\* | 142.23 ± 7.02+ | 13.43 ± 0.77+ | 5.24 ± 0.41+ | 24.43 ± 1.49\*+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: HDL-high density lipoprotein; LDL-low density lipoprotein.

Appendix 2: Bronchoalveolar lavage fluid and complete blood cell counts of male rats following subacute O3exposure.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF cell counts, cells/ml** | | | | |
| **Total Cells** | **Eosinophils$** | **Lymphocytes** | **Macrophages$** | **Neutrophils** |
| **Control** | Air | 64351 ± 2207.4 | 7077 ± 823.8 | 825 ± 121.1 | 46781 ± 1427.3 | 7735 ± 816.7 |
| 0.8 ppm O3 | 74129 ± 4850.3 | 10686 ± 1860.7 | 800 ± 117.2 | 49579 ± 4114.5\* | 10398 ± 577.1 |
| **High Fructose** | Air | 76092 ± 4892.8 | 8449 ± 579.2+ | 1230 ± 239.3+ | 55862 ± 4602.9 | 8632 ± 605.8 |
| 0.8 ppm O3 | 71400 ± 3374.5 | 12452 ± 740.7\*+ | 1166 ± 211.3+ | 47084 ± 2618.8 | 8474 ± 854.2 |
| **High Fat** | Air | 66043 ± 3254.7+ | 8897 ± 869.0+ | 578 ± 127.0+ | 49993 ± 2380.5+ | 5259 ± 609.7+ |
| 0.8 ppm O3 | 62538 ± 2313.6+ | 14417 ± 994.7\*+ | 927 ± 112.6+ | 37259 ± 2204.4\*+ | 7623 ± 584.9+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF Protein Markers** | | | | |
| **GGT(U/l)** | **LDH (U/l)** | **Albumin (µg/l) $** | **NAG (U/l)** | **Protein (µg/l)** |
| **Control** | Air | 8.35 ± 0.27 | 42.73 ± 1.11 | 6.51 ± 0.68 | 5.67 ± 0.47 | 105.72 ± 4.19 |
| 0.8 ppm O3 | 8.70 ± 0.34 | 53.33 ± 4.83 | 9.44 ± 1.29\* | 5.65 ± 0.52 | 121.05 ± 5.54\* |
| **High Fructose** | Air | 9.43 ± 0.20+ | 44.70 ± 3.43+ | 6.50 ± 0.59+ | 5.72 ± 0.35 | 112.74 ± 5.60+ |
| 0.8 ppm O3 | 8.83 ± 0.81+ | 54.92 ± 5.51+ | 11.34 ± 1.19\*+ | 5.62 ± 0.47 | 124.67 ± 5.50+ |
| **High Fat** | Air | 8.17 ± 0.22+ | 40.57 ± 1.69+ | 5.60 ± 0.36 | 5.27 ± 0.63 | 113.18 ± 4.47 |
| 0.8 ppm O3 | 7.81 ± 0.18+ | 43.25 ± 1.49+ | 10.26 ± 1.64\* | 5.37 ± 0.46 | 127.18 ± 5.83 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: GGT – γ-glutamyl transferase; LDH – lactate dehydrogenase; NAG – N-acetyl glucosaminidase.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 1** | | | |
| **WBC (x106/ml)** | **RBC (x106/ml)** | **HgB (g/dL)** | **Hct (%)** |
| **Control** | Air | 4.42 ± 0.30 | 7.00 ± 0.11 | 12.9 ± 0.18 | 35.68 ± 0.59 |
| 0.8 ppm O3 | 3.29 ± 0.35\* | 6.81 ± 0.11 | 12.59 ± 0.18 | 35.25 ± 0.59 |
| **High Fructose** | Air | 3.89 ± 0.35+ | 7.35 ± 0.12+ | 13.48 ± 0.22+ | 37.74 ± 0.69+ |
| 0.8 ppm O3 | 2.70 ± 0.26\*+ | 7.23 ± 0.08+ | 13.36 ± 0.15+ | 37.19 ± 0.44+ |
| **High Fat** | Air | 3.60 ± 0.44+ | 7.11 ± 0.09 | 12.90 ± 0.18 | 35.86 ± 0.45 |
| 0.8 ppm O3 | 2.30 ± 0.20\*+ | 7.08 ± 0.13 | 13.01 ± 0.22 | 36.11 ± 0.42 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: WBC-white blood cells; RBC-red blood cells; HgB-Hemoglobin; HcT-hematocrit.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 2** | | | | |
| **MCV (fL)** | **MCH (pg/cell)** | **MCHC (g/dL)** | **Platelets (x106/ml)$** | **Lymphocyte%$** |
| **Control** | Air | 50.98 ± 0.26 | 18.47 ± 0.25 | 36.21 ± 0.39 | 832.78 ± 16.07 | 84.23 ± 1.89 |
| 0.8 ppm O3 | 51.77 ± 0.80 | 18.49 ± 0.19 | 35.74 ± 0.50 | 924.30 ± 34.15\* | 80.59 ± 0.95 |
| **High Fructose** | Air | 51.52 ± 0.51+ | 18.36 ± 0.23 | 35.78 ± 0.58 | 766.00 ± 19.56+ | 81.20 ± 2.15 |
| 0.8 ppm O3 | 51.41 ± 0.22+ | 18.49 ± 0.15 | 35.98 ± 0.28 | 849.60 ± 17.31\*+ | 78.85 ± 1.45 |
| **High Fat** | Air | 50.44 ± 0.12+ | 18.15 ± 0.12 | 36.00 ± 0.24 | 830.60 ± 21.54+ | 84.34 ± 1.13+ |
| 0.8 ppm O3 | 51.07 ± 0.42+ | 18.40 ± 0.13 | 36.04 ± 0.27 | 843.40 ± 11.70+ | 77.20 ± 3.12\*+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: MCV-mean cell volume; MCH-mean cell hemoglobin; MCHC-mean cell hemoglobin concentration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Glucose and Lipid Profile, mg/dL** | | | | |
| **Cholesterol$** | **Glucose** | **HDL** | **LDL** | **Triglycerides** |
| **Control** | Air | 44.94 ± 2.47 | 147.54 ± 8.93 | 11.34 ± 1.59 | 6.57 ± 0.77 | 23.95 ± 2.83 |
| 0.8 ppm O3 | 37.07 ± 2.15 | 160.50 ± 15.47 | 11.64 ± 0.91 | 6.40 ± 0.35 | 17.86 ± 1.28 |
| **High Fructose** | Air | 41.79 ± 1.54 | 168.23 ± 15.50+ | 13.48 ± 0.58+ | 4.63 ± 0.23+ | 62.20 ± 6.89+ |
| 0.8 ppm O3 | 46.50 ± 2.32 | 181.99 ± 14.28+ | 16.86 ± 0.95\*+ | 4.76 ± 0.19+ | 65.41 ± 6.26+ |
| **High Fat** | Air | 54.76 ± 0.95+ | 189.67 ± 9.14+ | 18.69 ± 0.74+ | 7.77 ± 0.60+ | 29.62 ± 1.62+ |
| 0.8 ppm O3 | 57.71 ± 1.34+ | 187.47 ± 9.66+ | 22.08 ± 1.18\*+ | 7.64 ± 0.44+ | 32.96 ± 3.30+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: HDL-high density lipoprotein; LDL-low density lipoprotein.

Appendix 3. Bronchoalveolar lavage fluid and complete blood cell counts of female rats following acute O3exposure.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF cell counts, cells/ml** | | | | |
| **Total Cells** | **Eosinophils$** | **Lymphocytes** | **Macrophages$** | **Neutrophils** |
| **Control** | Air | 77976 ± 3894.7 | 4608 ± 535.8 | 958 ± 135.6 | 53407 ± 3044.7 | 15253 ± 1496.7 |
| 0.8 ppm O3 | 73091 ± 4043.4 | 15017 ± 1218.1\* | 1287 ± 210.5 | 38560 ± 3694.8\* | 15440 ± 903.5 |
| **High Fructose** | Air | 87101 ± 8890.7+ | 14096 ± 1461.0+ | 1207 ± 206.4+ | 55960 ± 6635.9+ | 12781 ± 1684.5+ |
| 0.8 ppm O3 | 96411 ± 6515.2\*+ | 31231 ± 2444.7\*+ | 809 ± 177.5+ | 51289 ± 5541.7\*+ | 10443 ± 1052.0+ |
| **High Fat** | Air | 88260 ± 4846.5+ | 29279 ± 2569.0+ | 821 ± 106.1+ | 48864 ± 2934.6+ | 7049 ± 609.1+ |
| 0.8 ppm O3 | 83172 ± 3572.8+ | 39996 ± 2689.1\*+ | 581 ± 87.9+ | 36818 ± 2555.8\*+ | 4063 ± 419.4+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF Protein Markers** | | | | |
| **GGT(U/l) $** | **LDH (U/l)** | **Albumin (µg/ml) $** | **NAG (U/l)** | **Protein (µg/ml) $** |
| **Control** | Air | 11.04 ± 0.52 | 43.51 ± 1.97 | 6.74 ± 0.91 | 9.53 ± 0.67 | 102.63 ± 2.49 |
| 0.8 ppm O3 | 9.77 ± 0.29\* | 43.77 ± 2.92 | 23.21 ± 1.86\* | 10.89 ± 0.60 | 168.85 ± 10.74\* |
| **High Fructose** | Air | 10.96 ± 0.42+ | 43.02 ± 2.65 | 11.37 ± 1.86+ | 9.36 ± 0.54 | 129.72 ± 8.26+ |
| 0.8 ppm O3 | 10.80 ± 0.41+ | 47.31 ± 2.86 | 22.83 ± 2.10\*+ | 10.62 ± 0.47 | 171.13 ± 10.52\*+ |
| **High Fat** | Air | 11.60 ± 0.30+ | 42.29 ± 2.30 | 6.17 ± 0.59 | 9.73 ± 0.73 | 111.49 ± 3.35 |
| 0.8 ppm O3 | 9.93 ± 0.51\*+ | 43.60 ± 3.15 | 24.56 ± 2.48\* | 11.49 ± 0.43 | 187.87 ± 15.58\* |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: GGT – γ-glutamyl transferase; LDH – lactate dehydrogenase; NAG – N-acetyl glucosaminidase.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 1** | | | |
| **WBC (x106/ml)** | **RBC (x106/ml)** | **HgB (g/dL)** | **Hct (%)** |
| **Control** | Air | 2.76 ± 0.24 | 7.44 ± 0.09 | 14.16 ± 0.17 | 37.56 ± 0.48 |
| 0.8 ppm O3 | 1.77 ± 0.18\* | 7.49 ± 0.08 | 14.23 ± 0.17 | 37.98 ± 0.43 |
| **High Fructose** | Air | 2.73 ± 0.21+ | 7.67 ± 0.11+ | 14.17 ± 0.25+ | 38.19 ± 0.52 |
| 0.8 ppm O3 | 2.23 ± 0.55+ | 7.64 ± 0.08+ | 14.14 ± 0.19+ | 38.05 ± 0.43 |
| **High Fat** | Air | 2.41 ± 0.16 | 7.64 ± 0.05+ | 14.40 ± 0.12+ | 38.62 ± 0.27+ |
| 0.8 ppm O3 | 1.81 ± 0.13\* | 7.82 ± 0.06+ | 14.72 ± 0.14+ | 39.75 ± 0.33+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: WBC-white blood cells; RBC-red blood cells; HgB-Hemoglobin; HcT-hematocrit.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 2** | | | | |
| **MCV (fL)** | **MCH**  **(pg/cell)** | **MCHC (g/dL)** | **Platelets (x106/ml)** | **Lymphocyte%** |
| **Control** | Air | 50.44 ± 0.10 | 19.06 ± 0.14 | 37.75 ± 0.26 | 851.0 ± 19.1 | 77.49 ± 1.89 |
| 0.8 ppm O3 | 50.70 ± 0.12 | 18.99 ± 0.07 | 37.49 ± 0.10 | 922.1 ± 15.1 | 71.64 ± 1.53\* |
| **High Fructose** | Air | 49.77 ± 0.08+ | 18.46 ± 0.10+ | 37.12 ± 0.21 | 828.0 ± 23.6 | 71.33 ± 1.60+ |
| 0.8 ppm O3 | 49.84 ± 0.12+ | 18.53 ± 0.12+ | 37.15 ± 0.29 | 772.0 ± 71.6 | 67.57 ± 2.94+ |
| **High Fat** | Air | 50.55 ± 0.08 | 18.82 ± 0.06 | 37.26 ± 0.10 | 792.5 ± 40.4+ | 73.14 ± 1.87 |
| 0.8 ppm O3 | 50.86 ± 0.14 | 18.81 ± 0.11 | 37.02 ± 0.23 | 861.9 ± 31.8+ | 71.90 ± 1.17 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: MCV-mean cell volume; MCH-mean cell hemoglobin; MCHC-mean cell hemoglobin concentration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Glucose and Lipid Profile, mg/dL** | | | | |
| **Cholesterol$** | **Glucose** | **HDL** | **LDL$** | **Triglycerides** |
| **Control** | Air | 74.55 ± 2.48 | 181.49 ± 5.56 | 19.64 ± 1.01 | 7.56 ± 0.40 | 25.76 ± 1.23 |
| 0.8 ppm O3 | 77.16 ± 3.30 | 189.17 ± 7.54 | 23.98 ± 1.24 | 4.04 ± 0.30\* | 28.54 ± 1.98 |
| **High Fructose** | Air | 80.41 ± 4.47 | 201.20 ± 12.12+ | 22.01 ± 1.83 | 4.46 ± 0.32+ | 61.37 ± 6.52+ |
| 0.8 ppm O3 | 68.75 ± 5.70 | 224.04 ± 8.69+ | 22.16 ± 0.56 | 3.72 ± 0.25+ | 48.17 ± 4.82+ |
| **High Fat** | Air | 72.17 ± 3.92 | 173.74 ± 4.64 | 27.40 ± 5.26 | 5.14 ± 0.53+ | 26.49 ± 1.31 |
| 0.8 ppm O3 | 82.15 ± 2.48 | 177.84 ± 7.50 | 21.32 ± 1.37 | 3.79 ± 0.19\*+ | 23.29 ± 1.22 |

Data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: HDL-high density lipoprotein; LDL-low density lipoprotein.

Appendix 4. Bronchoalveolar lavage fluid and complete blood cell counts of female rats following subacute O3exposure.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF cell counts, cells/ml** | | | | |
| **Total Cells** | **Eosinophils** | **Lymphocytes** | **Macrophages** | **Neutrophils** |
| **Control** | Air | 85743 ± 7681.0 | 21953 ± 1979.9 | 971 ± 183.8 | 54025 ± 5299.6 | 6961 ± 813.5 |
| 0.8 ppm O3 | 70363 ± 3060.7 | 30460 ± 1472.0\* | 629 ± 78.5 | 31940 ± 2719.8\* | 5572 ± 693.8 |
| **High Fructose** | Air | 91495 ± 4467.1 | 29596 ± 2281.7+ | 1023 ± 130.0 | 52832 ± 3212.5 | 6753 ± 510.2 |
| 0.8 ppm O3 | 78339 ± 3226.3\* | 36010 ± 1811.8\*+ | 725 ± 131.9 | 34782 ± 3589.2\* | 5703 ± 751.3 |
| **High Fat** | Air | 91628 ± 7253.8 | 33284 ± 2442.3+ | 1182 ± 247.6 | 47851 ± 4770.6 | 6579 ± 751.3 |
| 0.8 ppm O3 | 74734 ± 3049.3 | 39440 ± 1535.9+ | 543 ± 117.9 | 29788 ± 2507.1\* | 4059 ± 506.5\* |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **BALF Protein Markers** | | | | |
| **GGT(U/l)** | **LDH (U/l)** | **Albumin (µg/ml)** | **NAG (U/l)** | **Protein (µg/ml)** |
| **Control** | Air | 10.53 ± 0.42 | 38.29 ± 2.10 | 12.24 ± 1.05 | 4.91 ± 0.80 | 104.91 ± 4.44 |
| 0.8 ppm O3 | 10.01 ± 0.44\* | 39.18 ± 2.27 | 16.79 ± 1.62 | 6.27 ± 0.64 | 111.23 ± 6.51 |
| **High Fructose** | Air | 9.37 ± 0.44+ | 41.66 ± 1.94 | 19.18 ± 1.61 | 6.69 ± 0.69 | 132.78 ± 6.15+ |
| 0.8 ppm O3 | 9.56 ± 0.45+ | 37.51 ± 1.70 | 21.35 ± 2.41 | 6.25 ± 0.72 | 128.92 ± 9.27+ |
| **High Fat** | Air | 9.73 ± 0.46+ | 34.22 ± 2.05 | 10.81 ± 0.77 | 4.70 ± 0.36 | 103.94 ± 2.29 |
| 0.8 ppm O3 | 9.22 ± 0.32\*+ | 32.77 ± 1.31 | 22.40 ± 2.69\* | 6.07 ± 0.57 | 130.30 ± 7.34 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: GGT – γ- glutamyl transferase; LDH – lactate dehydrogenase; NAG – N-acetyl glucosaminidase.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 1** | | | |
| **WBC (x106/ml)** | **RBC (x106/ml)** | **HgB (g/dL)** | **Hct (%)** |
| **Control** | Air | 4.61 ± 0.43 | 7.07 ± 0.11 | 13.52 ± 0.17 | 36.32 ± 0.57 |
| 0.8 ppm O3 | 4.17 ± 0.42\* | 7.13 ± 0.11\* | 13.55 ± 0.18\* | 36.57 ± 0.60\* |
| **High Fructose** | Air | 3.95 ± 0.47 | 7.17 ± 0.13+ | 13.77 ± 0.25 | 36.67 ± 0.64+ |
| 0.8 ppm O3 | 3.53 ± 0.45\* | 7.28 ± 0.10+ | 13.84 ± 0.25 | 37.33 ± 0.50+ |
| **High Fat** | Air | 3.00 ± 0.33 | 7.42 ± 0.10+ | 13.98 ± 0.27 | 37.89 ± 0.52+ |
| 0.8 ppm O3 | 2.99 ± 0.23 | 7.56 ± 0.10\*+ | 14.36 ± 0.31 | 38.73 ± 0.53\*+ |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: WBC-white blood cells; RBC-red blood cells; HgB-Hemoglobin; HcT-hematocrit.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Complete Blood Count (CBC)—Part 2** | | | | |
| **MCV (fL)** | **MCH**  **(pg/cell)** | **MCHC (g/dL)** | **Platelets (x106/ml)** | **Lymphocyte%** |
| **Control** | Air | 51.38 ± 0.22 | 19.15 ± 0.25 | 37.28 ± 0.46 | 855.4 ± 16.0 | 85.56 ± 1.02 |
| 0.8 ppm O3 | 51.28 ± 0.24 | 19.03 ± 0.28 | 37.10 ± 0.50 | 861.1 ± 16.4 | 86.41 ± 0.88 |
| **High Fructose** | Air | 51.15 ± 0.21+ | 19.18 ± 0.30+ | 37.47 ± 0.52 | 862.4 ± 16.8 | 85.55 ± 1.23 |
| 0.8 ppm O3 | 51.29 ± 0.20+ | 19.03 ± 0.26+ | 37.07 ± 0.42 | 867.8 ± 17.4 | 83.97 ± 1.45 |
| **High Fat** | Air | 51.07 ± 0.12+ | 18.85 ± 0.21 | 36.89 ± 0.39 | 870.6 ± 17.4 | 84.32 ± 1.53 |
| 0.8 ppm O3 | 51.24 ± 0.14+ | 19.00 ± 0.24 | 37.07 ± 0.41 | 889.7 ± 8.2 | 80.46 ± 2.93 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. +Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group. Abbreviations: MCV-mean cell volume; MCH-mean cell hemoglobin; MCHC-mean cell hemoglobin concentration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Diet** | **Exposure** | **Glucose and Lipid Profile, mg/dL** | | | | |
| **Cholesterol** | **Glucose** | **HDL$** | **LDL** | **Triglycerides** |
| **Control** | Air | 55.93 ± 1.43 | 172.67 ± 6.29 | 17.54 ± 0.87 | 5.58 ± 0.56 | 26.12 ± 1.55 |
| 0.8 ppm O3 | 57.40 ± 1.79 | 173.27 ± 5.26 | 17.72 ± 0.75 | 5.43 ± 0.51 | 26.54 ± 1.40 |
| **High Fructose** | Air | 58.47 ± 1.80+ | 172.38 ± 4.73+ | 18.33 ± 0.83+ | 5.36 ± 0.46+ | 27.35 ± 0.89+ |
| 0.8 ppm O3 | 57.16 ± 2.34+ | 177.48 ± 6.09+ | 18.55 ± 0.83+ | 5.55 ± 0.42+ | 26.59 ± 1.20+ |
| **High Fat** | Air (n=7) | 57.46 ± 2.32 | 181.30 ± 6.38 | 18.38 ± 0.88 | 5.11 ± 0.17+ | 26.22 ± 0.99 |
| 0.8 ppm O3 | 59.86 ± 2.07 | 181.41 ± 6.03 | 17.30 ± 0.85 | 5.94 ± 0.72+ | 27.62 ± 1.68 |

All statistics performed on transformed measures; data reported as Mean ± SE for illustrative purposes. $Diet x Dose effect (p<0.05);

+Diet effect where the High Fructose and/or High Fat diet groups were significantly different from Purina 5001 group; Dose effect where the 0.8 ppm O3 group was significantly different from the Air group in the Purina 5001, High Fructose, and/or High Fat groups. Abbreviations: HDL-high density lipoprotein; LDL-low density lipoprotein.

Appendix 5. The F-distribution and p values for BALF and CBC data for male acute O3exposure.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Total Cells** | F(2,54)= 402.54, P<0.0001 | NS | NS | NS | NS |
| **Eosinophils** | F(2,53)= 236.92, P<0.0001 | F(1,18)= 12.60, P=0.0023 | F(1,17)= 5.93, P=0.0262 | F(1,18)= 4.45, P=0.0492 | F(2,53)= 4.33, P=0.0182 |
| **Lymphocytes** | F(2,53)= 65.12, P<0.0001 | NS | NS | NS | NS |
| **Macrophages** | F(2,53)= 575.76, P<0.0001 | F(1,18)= Infty, P<0.0001 | F(1,17)= 10.68, P<0.0001 | F(1,18)= 0.19, P<0.0001 | F(2,53)= 3.61, P=0.0340 |
| **Neutrophils** | F(2,53)= 70.86, P<0.0001 | NS | NS | NS | NS |
| **GGT** | F(2,53)= 456.04, P<0.0001 | F(1,18)= 6.85, P=0.0174 | F(1,17)= 7.34, P=0.0149 | NS | NS |
| **LDH** | F(2,53)= 259.12, P<0.0001 | NS | NS | NS | NS |
| **Albumin** | F(2,53)= 48.91, P<0.0001 | F(1,18)= 4.76, P=0.0427 | F(1,17)= 6.43, P=0.0213 | F(1,18)= 9.04, P=0.0076 | NS |
| **NAG** | NS | NS | NS | NS | NS |
| **Protein** | F(2,53)= 3312.70, P<0.0001 | NS | NS | F(1,18)= 8.54, P=0.0091 | NS |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **WBC** | F(2,53)= 3.72, P=0.0306 | F(1,18)= 8.66, P=0.0087 | F(1,17)= 4.70, P=0.0446 | F(1,18)= 8.32, P=0.0099 | NS |
| **RBC** | NS | NS | NS | NS | NS |
| **HgB** | NS | NS | NS | NS | NS |
| **Hct** | NS | NS | NS | NS | NS |
| **MCV** | NS | NS | NS | NS | NS |
| **MCH** | NS | NS | NS | NS | NS |
| **MCHC** | NS | NS | NS | NS | NS |
| **Platlets** | F(2,53)= 8.60, P=0.0006 | NS | NS | NS | NS |
| **Lymphocyte%** | NS | F(1,18)= 6.68, P=0.0187 | NS | NS | NS |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Cholesterol** | NS | F(1,18)= 20.02, P=0.0003 | NS | F(1,18)= 4.51, P=0.0479 | F(2,53)= 17.32, P<0.0001 |
| **Glucose** | F(2,53)= 226.40, P<0.0001 | NS | NS | NS | NS |
| **HDL** | F(2,53)= 10.14, P=0.0002 | NS | NS | NS | F(2,53)= 14.19, P<0.0001 |
| **LDL** | F(2,53)= 88.75, P<0.0001 | NS | NS | NS | NS |
| **Triglycerides** | F(2,53)= 140.00, P<0.0001 | F(1,18)= 8.86, P=0.0081 | NS | F(1,18)= 15.19, P=0.0011 | NS |

Appendix 6. The F-distribution and p values for BALF and CBC data for the male subacute O3exposure.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Total Cells** | F(2,53)= 1008.33, P<0.0001 | NS | NS | NS | NS |
| **Eosinophils** | F(2,53)= 177.27, P<0.0001 | NS | F(1,18)= 18.13, P=0.0005 | F(1,18)= 17.47, P=0.0006 | F(2,53)= 8.81, P=0.0005 |
| **Lymphocytes** | F(2,53)= 92.68, P<0.0001 | NS | NS | NS | NS |
| **Macrophages** | F(2,53)= 703.62, P<0.0001 | F(1,17)= Infty, P<0.0001 | NS | F(1,18)= 15.40, P=0.0010 | F(2,53)= 14.98, P<0.0001 |
| **Neutrophils** | F(2,53)= 70.86, P<0.0001 | NS | NS | NS | NS |
| **GGT** | F(2,53)= 623.03, P<0.0001 | NS | NS | NS | NS |
| **LDH** | F(2,53)= 1136.27, P<0.0001 | NS | NS | NS | NS |
| **Albumin** | F(2,53)= 109.95, P<0.0001 | F(1,17)= 6.56, P=0.0202 | F(1,18)= 13.22, P=0.0019 | F(1,18)= 9.06, P=0.0075 | F(2,53)= 12.56, P<0.0001 |
| **NAG** | NS | NS | NS | NS | NS |
| **Protein** | F(2,53)= 487.53, P<0.0001 | F(1,17)= 4.70, P=0.0446 | NS | NS | NS |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **WBC** | F(2,53)= 19.49, P<0.0001 | F(1,17)= 6.25, P=0.0229 | F(1,18)= 8.21, P=0.0103 | F(1,18)= 7.22, P=0.0151 | NS |
| **RBC** | F(2,53)= 6.34, P=0.0034 | NS | NS | NS | NS |
| **HgB** | F(2,53)= 6.27, P=0.0036 | NS | NS | NS | NS |
| **Hct** | F(2,53)= 7.72, P=0.0011 | NS | NS | NS | NS |
| **MCV** | F(2,53)= 18193.9, P<0.0001 | NS | NS | NS | NS |
| **MCH** | NS | NS | NS | NS | NS |
| **MCHC** | NS | NS | NS | NS | NS |
| **Platlets** | F(2,53)= 1960.07, P<0.0001 | F(1,17)= 6.39, P=0.0216 | F(1,18)= 10.25, P=0.0050 | NS | F(2,53)= 4.58, P=0.0146 |
| **Lymphocyte%** | F(2,53)= 692.97, P<0.0001 | NS | NS | F(1,18)= 5.01, P=0.0381 | F(2,53)= 4.82, P=0.0119 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Cholesterol** | F(2,53)= 37.47, P<0.0001 | NS | NS | NS | F(2,53)= 6.61, P=0.0027 |
| **Glucose** | F(2,53)= 229.83, P<0.0001 | NS | NS | NS | NS |
| **HDL** | F(2,53)= 38.13, P<0.0001 | NS | F(1,18)= 9.31, P=0.0069 | F(1,18)= 5.90, P=0.0258 | NS |
| **LDL** | F(2,53)= 49.42, P<0.0001 | NS | NS | NS | NS |
| **Triglycerides** | F(2,53)= 116.67, P<0.0001 | NS | NS | NS | NS |

Appendix 7. The F-distribution and p values for BALF and CBC data for the female acute O3exposure.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Total Cells** | F(2,53)= 398.04, P<0.0001 | NS | F(1,18)= Infty, P<0.0001 | NS | NS |
| **Eosinophils** | F(2,53)= 160.77, P<0.0001 | F(1,17)=67.96, P<0.0001 | F(1,18)= 36.20, P<0.0001 | F(1,18)= 8.30, P=0.0099 | F(2,53)= 9.75, P=0.0002 |
| **Lymphocytes** | F(2,53)= 98.55, P<0.0001 | NS | NS | NS | NS |
| **Macrophages** | F(2,53)= 396.32, P<0.0001 | F(1,17)= 9.77, P=0.0062 | F(1,18)= Infty, P<0.0001 | F(1,18)= 11.21, P=0.0036 | F(2,53)= 10.33, P=0.0002 |
| **Neutrophils** | F(2,53)= 200.02, P<0.0001 | NS | NS | NS | NS |
| **GGT** | F(2,53)= 302.85, P<0.0001 | F(1,17)= 4.46, P=0.0498 | NS | F(1,18)= 7.88, P=0.0116 | F(2,53)= 3.26, P=0.0461 |
| **LDH** | NS | NS | NS | NS | NS |
| **Albumin** | F(2,53)= 91.47, P<0.0001 | F(1,17)=83.97, P<0.0001 | F(1,18)= 16.71, P=0.0007 | F(1,18)= 117.17, P<0.0001 | F(2,53)= 12.65, P<0.0001 |
| **NAG** | NS | NS | NS | NS | NS |
| **Protein** | F(2,53)= 479.08, P<0.0001 | F(1,17)=83.81, P<0.0001 | F(1,18)= 9.59, P=0.0062 | F(1,18)= 53.71, P<0.0001 | F(2,53)= 9.32, P=0.0003 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **WBC** | F(2,53)= 3.83, P=0.0279 | F(1,17)= 10.31, P=0.0051 | NS | F(1,18)= 8.55, P=0.0091 | NS |
| **RBC** | F(2,53)= 5.62, P=0.0061 | NS | NS | NS | NS |
| **HgB** | F(2,53)= 5374.41, P<0.0001 | NS | NS | NS | NS |
| **Hct** | F(2,53)= 6.21, P=0.0038 | NS | NS | NS | NS |
| **MCV** | F(2,53)= 39.56, P<0.0001 | NS | NS | NS | NS |
| **MCH** | F(2,53)= 13.00, P<0.0001 | NS | NS | NS | NS |
| **MCHC** | NS | NS | NS | NS | NS |
| **Platlets** | F(2,53)= 119.85, P<0.0001 | NS | NS | NS | NS |
| **Lymphocyte%** | F(2,53)= 3.59, P=0.0344 | F(1,17)= 5.62, P=0.0299 | NS | NS | NS |

Appendix 8. The F-distribution and p values for the BALF and CBC data for the female subacute O3exposure.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **Total Cells** | NS | NS | F(1,18)= 5.70, P=0.0281 | NS | NS |
| **Eosinophils** | F(2,53)= 13.65, P<0.0001 | F(1,18)= 11.89, P=0.0029 | F(1,18)= 4.85, P=0.0410 | NS | NS |
| **Lymphocytes** | NS | NS | NS | NS | NS |
| **Macrophages** | NS | F(1,18)= 13.75, P=0.0016 | F(1,18)= 14.04, P=0.0015 | F(1,17)= 10.51, P=0.0048 | NS |
| **Neutrophils** | NS | NS | NS | F(1,17)= 7.39, P=0.0146 | NS |
| **GGT** | F(2,53)= 5.87, P=0.0050 | F(1,18)= 6.09, P=0.0239 | NS | F(1,17)= 5.66, P=0.0293 | NS |
| **LDH** | NS | NS | NS | NS | NS |
| **Albumin** | NS | NS | NS | F(1,17)= 5.41, P=0.0327 | NS |
| **NAG** | NS | NS | NS | NS | NS |
| **Protein** | F(2,53)= 6.39, P=0.0034 | NS | NS | NS | NS |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Diet Effect** | **Dose Effect** | | | **Diet x Dose Effect** |
| **Control** | **High Fructose** | **High Fat** |
| **WBC** | NS | F(1,18)= 10.84, P=0.0041 | F(1,18)= 6.67, P=0.0188 | NS | NS |
| **RBC** | F(2,53)= 15.51, P<0.0001 | F(1,18)= 11.41, P=0.0034 | NS | F(1,17)= 12.06, P=0.0029 | NS |
| **HgB** | NS | F(1,18)= 5.84, P=0.0265 | NS | NS | NS |
| **Hct** | F(2,53)= 7.50, P=0.0014 | F(1,18)= 9.48, P=0.0065 | NS | F(1,17)= 16.50, P=0.0008 | NS |
| **MCV** | F(2,53)= 25.53, P<0.0001 | NS | NS | NS | NS |
| **MCH** | F(2,53)= 6.90, P=0.0022 | NS | NS | NS | NS |
| **MCHC** | NS | NS | NS | NS | NS |
| **Platlets** | NS | NS | NS | NS | NS |
| **Lymphocyte%** | NS | NS | NS | NS | NS |

Appendix 9. The F-distribution and p values for ventilatory, body composition, and motor activity for the male subacute O3 exposure.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Dose Effect** | | | | | | | | |
| **Control** | | | **High Fructose** | | | **High Fat** | | |
| Week 1 | Week 2 | Week 3 | Week 1 | Week 2 | Week 3 | Week 1 | Week 2 | Week 3 |
| **Frequency** | NS | NS | F(1,17)= 6.29, P=0.0225 | NS | NS | F(1,18)= 5.01, P=0.0380 | NS | NS | NS |
| **Tidal Volume** | F(1,17)= 20.69, P=0.0003 | NS | F(1,17)= 9.34, P=0.0071 | F(1,18)= 8.25, P=0.0101 | NS | F(1,18)= 10.80, P=0.0041 | F(1,18)= 5.48, P=0.0309 | NS | NS |
| **Penh** | F(1,17)= 7.48, P=0.0141 | F(1,17)= 12.18, P=0.0028 | NS | F(1,18)= 8.25, P=0.0101 | NS | F(1,18)= 10.80, P=0.0041 | F(1,18)= 9.74, P=0.0059 | NS | F(1,18)= 6.54, P=0.0198 |
| **Minute Volume** | NS | NS | NS | NS | NS | NS | NS | NS | NS |
|  | | | | | | | | | |
|  | **Control** | | | **High Fructose** | | | **High Fat** | | |
| **%Fat Change** | F(1,18)= 11.95, P=0.0028 | | | NS | | | NS | | |
| **%Lean Change** | F(1,18)= 6.52, P=0.0200 | | | NS | | | NS | | |
| **%Fluid Change** | NS | | | F(1,17)= 5.36, P=0.0333 | | | NS | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Horizontal Activity** | F(1,18)= 23.09, P=0.0001 | NS | NS |
| **Vertical Activity** | F(1,18)= 15.71, P=0.0009 | NS | NS |

Appendix 10. The F-distribution and p values for ventilatory parameters, body composition, and motor activity for the female subacute O3exposure.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Dose Effect** | | | | | | | | |
| **Control** | | | **High Fructose** | | | **High Fat** | | |
| Week 1 | Week 2 | Week 3 | Week 1 | Week 2 | Week 3 | Week 1 | Week 2 | Week 3 |
| **Frequency** | F(1,18)= 9.28,  P=0.0069 | NS | NS | NS | NS | NS | F(1,18)= 4.87,  P=0.0406 | NS | NS |
| **Tidal Volume** | F(1,18)= 26.11, P<0.0001 | NS | NS | F(1,18)= 5.19, P=0.0351 | NS | NS | F(1,18)= 9.78, P=0.0058 | NS | F(1,18)= 4.86, P=0.0407 |
| **Penh** | F(1,18)= 29.95, P<0.0001 | F(1,18)= 60.84, P<0.0001 | F(1,18)= 32.15, P<0.0001 | F(1,18)= 6.67, P=0.0188 | NS | NS | F(1,18)= 19.15, P=0.0004 | NS | F(1,18)= 6.53, P=0.0199 |
| **Minute Volume** | NS | NS | NS | NS | NS | NS | NS | NS | NS |
|  | | | | | | | | | |
|  | **Control** | | | **High Fructose** | | | **High Fat** | | |
| **%Fat Change** | NS | | | NS | | | NS | | |
| **%Lean Change** | NS | | | NS | | | NS | | |
| **%Fluid Change** | NS | | | NS | | | NS | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Horizontal Activity** | F(1,18)= 11.46, P=0.0033 | NS | NS |
| **Vertical Activity** | F(1,18)= 15.22, P=0.0010 | NS | NS |