|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PFAS** | **TC** | **HDL** | **LDL** | **Tryglicerides** |
| **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** |
| **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** |
| log\_pfoa | 1.03 | -0.01 | 2.07 | 1.01 | -0.06 | 2.08 | -0.265 | -0.670 | 0.139 | -0.04 | -0.50 | 0.42 | 1.206 | 0.296 | 2.116 | 0.74 | -0.15 | 1.63 | 0.008 | -0.012 | 0.027 | 0.02 | 0.00 | 0.04 |
| II Q | -1.42 | -3.99 | 1.16 | 3.13 | 0.67 | 5.60 | -0.044 | -1.048 | 0.961 | -0.10 | -1.15 | 0.96 | -1.026 | -3.287 | 1.236 | 2.67 | 0.61 | 4.72 | -0.024 | -0.072 | 0.024 | 0.05 | 0.01 | 0.09 |
| III Q  | 0.24 | -2.40 | 2.87 | 2.64 | -0.01 | 5.28 | -0.010 | -1.039 | 1.019 | 0.03 | -1.10 | 1.17 | 0.391 | -1.923 | 2.705 | 2.08 | -0.13 | 4.29 | -0.019 | -0.068 | 0.030 | 0.03 | -0.01 | 0.07 |
| IV Q | 2.98 | 0.26 | 5.69 | 2.49 | -0.50 | 5.49 | -0.390 | -1.450 | 0.669 | -0.04 | -1.33 | 1.24 | 2.990 | 0.605 | 5.375 | 2.08 | -0.42 | 4.57 | 0.025 | -0.026 | 0.075 | 0.04 | -0.01 | 0.08 |
| log\_pfos | 3.63 | 2.10 | 5.16 | 3.19 | 1.55 | 4.84 | 1.003 | 0.406 | 1.599 | 1.47 | 0.77 | 2.18 | 3.187 | 1.863 | 4.510 | 2.13 | 0.76 | 3.51 | -0.025 | -0.053 | 0.004 | -0.02 | -0.04 | 0.01 |
| II Q | 0.99 | -1.57 | 3.55 | 6.21 | 3.75 | 8.67 | 0.639 | -0.363 | 1.640 | 1.12 | 0.07 | 2.18 | 1.106 | -1.145 | 3.356 | 4.70 | 2.65 | 6.75 | -0.040 | -0.088 | 0.007 | 0.03 | -0.01 | 0.07 |
| III Q  | 2.92 | 0.30 | 5.53 | 5.06 | 2.45 | 7.67 | 1.173 | 0.151 | 2.195 | 1.26 | 0.14 | 2.38 | 2.668 | 0.374 | 4.963 | 3.42 | 1.24 | 5.59 | -0.053 | -0.102 | -0.004 | 0.01 | -0.03 | 0.05 |
| IV Q | 6.10 | 3.43 | 8.78 | 4.99 | 2.10 | 7.88 | 1.558 | 0.512 | 2.604 | 2.30 | 1.06 | 3.54 | 5.129 | 2.795 | 7.464 | 3.58 | 1.17 | 5.99 | -0.031 | -0.081 | 0.019 | -0.05 | -0.09 | -0.01 |
| log\_pfhxs | 1.43 | 0.22 | 2.64 | 1.43 | 0.14 | 2.72 | -0.093 | -0.566 | 0.380 | 0.06 | -0.49 | 0.61 | 1.535 | 0.471 | 2.598 | 1.15 | 0.08 | 2.23 | 0.000 | -0.022 | 0.023 | 0.01 | 0.00 | 0.03 |
| II Q | -0.01 | -2.64 | 2.61 | 3.21 | 0.81 | 5.62 | 0.145 | -0.879 | 1.169 | -0.54 | -1.57 | 0.49 | 0.078 | -2.229 | 2.385 | 3.28 | 1.28 | 5.29 | -0.024 | -0.073 | 0.025 | 0.04 | 0.00 | 0.07 |
| III Q  | 0.92 | -1.69 | 3.53 | 2.09 | -0.46 | 4.64 | 0.195 | -0.823 | 1.213 | 0.00 | -1.09 | 1.10 | 0.908 | -1.379 | 3.196 | 1.66 | -0.47 | 3.79 | -0.032 | -0.080 | 0.017 | 0.03 | -0.01 | 0.06 |
| IV Q | 3.48 | 0.80 | 6.16 | 3.18 | 0.20 | 6.16 | 0.153 | -0.892 | 1.198 | 0.28 | -0.99 | 1.56 | 3.393 | 1.040 | 5.746 | 2.97 | 0.49 | 5.46 | -0.004 | -0.054 | 0.046 | 0.01 | -0.04 | 0.05 |
| log\_pfna | 5.61 | 3.19 | 8.03 | 2.43 | -0.09 | 4.94 | 1.132 | 0.186 | 2.078 | 1.56 | 0.49 | 2.64 | 5.181 | 3.068 | 7.293 | 1.70 | -0.39 | 3.80 | -0.024 | -0.069 | 0.021 | -0.04 | -0.08 | 0.00 |
| medium | 4.84 | 2.82 | 6.86 | 2.01 | -0.26 | 4.28 | 0.744 | -0.046 | 1.534 | 1.56 | 0.59 | 2.53 | 4.325 | 2.551 | 6.098 | 0.26 | -1.64 | 2.15 | -0.010 | -0.048 | 0.028 | 0.02 | -0.02 | 0.05 |
| high | 4.91 | 2.55 | 7.26 | 2.49 | -0.12 | 5.09 | 1.153 | 0.231 | 2.076 | 1.97 | 0.85 | 3.08 | 4.499 | 2.441 | 6.556 | 1.62 | -0.55 | 3.78 | -0.023 | -0.067 | 0.021 | -0.05 | -0.09 | -0.01 |

Table S1: Association between ln-PFAS (ln ng/mL) and Serum Lipids (mg/dL) from GAM models, stratified by gender: adjusted β\* coefficients and 95% Confidence Intervals (CI). ADOLESCENTS

Table S2: Association between ln-PFAS (ln ng/mL) and Serum Lipids (mg/dL) from GAM models, stratified by gender: adjusted β\* coefficients and 95% Confidence Intervals (CI). CHILDREN

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **PFAS** | **TC** | **HDL** | **LDL** | **Tryglicerides** |
| **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** |
| Coef | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** |
| log\_pfoa | 0.33 | -1.49 | 2.15 | 1.35 | -0.50 | 3.20 | 0.95 | 0.15 | 1.75 | 0.33 | -0.42 | 1.09 | -0.39 | -1.99 | 1.22 | 0.80 | -0.87 | 2.47 | -0.02 | -0.05 | 0.01 | 0.01 | -0.01 | 0.04 |
| II Q | -4.63 | -8.87 | -0.39 | 4.74 | 0.76 | 8.71 | 0.90 | -0.96 | 2.75 | 0.39 | -1.24 | 2.02 | -4.98 | -8.71 | -1.25 | 3.60 | 0.02 | 7.19 | -0.06 | -0.12 | 0.01 | 0.04 | -0.01 | 0.10 |
| III Q  | -2.13 | -6.32 | 2.07 | 2.54 | -1.51 | 6.60 | 1.88 | 0.05 | 3.71 | 0.76 | -0.90 | 2.43 | -3.57 | -7.25 | 0.12 | 1.08 | -2.58 | 4.75 | -0.05 | -0.11 | 0.02 | 0.03 | -0.03 | 0.09 |
| IV Q | 0.27 | -3.84 | 4.39 | 5.45 | 1.13 | 9.77 | 1.75 | -0.05 | 3.56 | 1.07 | -0.70 | 2.85 | -0.65 | -4.28 | 2.97 | 3.81 | -0.09 | 7.71 | -0.07 | -0.13 | 0.00 | 0.04 | -0.02 | 0.11 |
| log\_pfos | 4.50 | 1.74 | 7.25 | 8.01 | 5.34 | 10.67 | 2.01 | 0.80 | 3.22 | 1.88 | 0.78 | 2.98 | 3.26 | 0.82 | 5.70 | 5.75 | 3.34 | 8.17 | -0.04 | -0.08 | 0.01 | 0.01 | -0.03 | 0.05 |
| II Q | 2.10 | -1.89 | 6.08 | 5.32 | 1.46 | 9.18 | 2.90 | 1.16 | 4.63 | 1.74 | 0.15 | 3.33 | 0.10 | -3.41 | 3.61 | 3.59 | 0.09 | 7.09 | -0.04 | -0.10 | 0.02 | -0.01 | -0.06 | 0.05 |
| III Q  | 3.29 | -0.85 | 7.43 | 7.98 | 3.97 | 11.99 | 2.36 | 0.54 | 4.18 | 2.56 | 0.91 | 4.21 | 1.50 | -2.17 | 5.16 | 4.86 | 1.22 | 8.49 | -0.01 | -0.08 | 0.05 | 0.02 | -0.03 | 0.08 |
| IV Q | 6.71 | 2.66 | 10.76 | 10.08 | 6.06 | 14.10 | 3.03 | 1.25 | 4.82 | 2.98 | 1.32 | 4.63 | 5.03 | 1.43 | 8.62 | 6.81 | 3.18 | 10.45 | -0.07 | -0.13 | -0.01 | -0.01 | -0.06 | 0.05 |
| log\_pfhxs | -0.13 | -2.39 | 2.13 | 2.68 | 0.44 | 4.92 | 1.06 | 0.06 | 2.05 | 0.50 | -0.42 | 1.42 | -0.83 | -2.83 | 1.17 | 2.02 | 0.00 | 4.04 | -0.03 | -0.07 | 0.00 | 0.01 | -0.02 | 0.04 |
| II Q | -4.37 | -8.49 | -0.24 | 1.48 | -2.39 | 5.34 | 1.48 | -0.32 | 3.28 | -0.61 | -2.19 | 0.97 | -5.00 | -8.63 | -1.38 | 0.99 | -2.50 | 4.49 | -0.06 | -0.12 | 0.00 | 0.06 | 0.01 | 0.12 |
| III Q  | -2.68 | -6.94 | 1.57 | 3.12 | -0.91 | 7.15 | 2.19 | 0.32 | 4.05 | 1.17 | -0.48 | 2.82 | -4.69 | -8.43 | -0.94 | 1.81 | -1.83 | 5.45 | -0.01 | -0.08 | 0.05 | 0.01 | -0.04 | 0.07 |
| IV Q | -1.08 | -5.27 | 3.12 | 4.75 | 0.54 | 8.96 | 2.04 | 0.20 | 3.88 | 0.56 | -1.16 | 2.28 | -2.03 | -5.72 | 1.67 | 3.60 | -0.21 | 7.40 | -0.08 | -0.15 | -0.02 | 0.04 | -0.02 | 0.10 |
| log\_pfna | 7.83 | 2.25 | 13.41 | 8.35 | 3.36 | 13.33 | 1.84 | -0.61 | 4.30 | 2.49 | 0.44 | 4.53 | 6.83 | 1.90 | 11.77 | 5.61 | 1.11 | 10.11 | -0.05 | -0.13 | 0.04 | 0.00 | -0.07 | 0.07 |
| medium | 2.73 | -0.80 | 6.25 | 3.05 | -0.70 | 6.81 | 0.95 | -0.60 | 2.50 | 1.91 | 0.37 | 3.45 | 2.34 | -0.77 | 5.45 | 0.50 | -2.90 | 3.89 | -0.03 | -0.09 | 0.02 | 0.02 | -0.04 | 0.07 |
| high | 6.07 | 0.56 | 11.59 | 8.72 | 3.64 | 13.81 | 1.42 | -1.00 | 3.83 | 2.10 | 0.02 | 4.18 | 5.14 | 0.28 | 10.00 | 6.79 | 2.20 | 11.38 | -0.02 | -0.10 | 0.06 | -0.02 | -0.09 | 0.06 |

Table S3. Association between PFAS (ln ng/mL) and Blood Pressure (mm/Hg) from GAM models, stratified by gender: adjusted β\* coefficients and 95% Confidence Intervals (CI). Stratified by gender, ADOLESCENTS

|  |  |  |
| --- | --- | --- |
|  | **SYSTOLIC BP** | **DIASTOLIC BP** |
| **PFAS** | **M** | **F** | **M** | **F** |
|   | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** |
| ln\_pfoa | -0.04 | -0.59 | 0.50 | -0.39 | -0.88 | 0.10 | -0.06 | -0.44 | 0.32 | -0.18 | -0.53 | 0.17 |
| II Q | -0.16 | -1.51 | 1.18 | -0.52 | -1.66 | 0.61 | -0.05 | -1.00 | 0.90 | -0.48 | -1.29 | 0.32 |
| III Q | -0.60 | -1.98 | 0.78 | -1.34 | -2.55 | -0.12 | -0.33 | -1.30 | 0.64 | -0.22 | -1.08 | 0.64 |
| IV Q | -0.21 | -1.63 | 1.21 | -0.88 | -2.26 | 0.49 | 0.17 | -0.83 | 1.17 | -0.46 | -1.43 | 0.52 |
| log\_pfos | -0.21 | -1.02 | 0.59 | -0.93 | -1.69 | -0.18 | -0.25 | -0.81 | 0.32 | -0.59 | -1.12 | -0.05 |
| II Q | 0.08 | -1.26 | 1.42 | -1.05 | -2.18 | 0.08 | 0.18 | -0.77 | 1.12 | -1.10 | -1.90 | -0.30 |
| III Q | -0.70 | -2.07 | 0.67 | -1.17 | -2.37 | 0.02 | -0.31 | -1.27 | 0.66 | -1.03 | -1.88 | -0.18 |
| IV Q | -0.60 | -2.00 | 0.80 | -2.36 | -3.69 | -1.03 | -0.54 | -1.53 | 0.44 | -0.82 | -1.76 | 0.12 |
| log\_pfhxs | -0.27 | -0.91 | 0.36 | -0.33 | -0.92 | 0.26 | -0.14 | -0.59 | 0.30 | -0.20 | -0.62 | 0.22 |
| II Q | -0.34 | -1.71 | 1.03 | -0.26 | -1.37 | 0.84 | -0.03 | -1.00 | 0.93 | -0.04 | -0.82 | 0.74 |
| III Q | -0.75 | -2.11 | 0.62 | -0.69 | -1.86 | 0.48 | -0.24 | -1.20 | 0.72 | -0.15 | -0.98 | 0.68 |
| IV Q | -0.56 | -1.95 | 0.84 | -0.43 | -1.80 | 0.93 | -0.47 | -1.46 | 0.51 | -0.08 | -1.05 | 0.89 |
| log\_pfna | -0.40 | -1.66 | 0.87 | -0.90 | -2.05 | 0.26 | 0.40 | -0.49 | 1.29 | -0.17 | -0.99 | 0.65 |
| medium | -0.31 | -1.37 | 0.75 | -1.03 | -2.07 | 0.02 | 0.26 | -0.48 | 1.01 | 0.52 | -0.22 | 1.26 |
| high | -0.03 | -1.27 | 1.20 | -0.85 | -2.05 | 0.34 | 0.38 | -0.49 | 1.25 | -0.23 | -1.07 | 0.62 |

Table S4. Association between PFAS (ln ng/mL) and Blood Pressure (mm/Hg) from GAM models, stratified by gender: adjusted β\* coefficients and 95% Confidence Intervals (CI). Stratified by gender, CHILDREN

|  |  |  |
| --- | --- | --- |
|  | **SYSTOLIC BP** | **DIASTOLIC BP** |
| **PFAS** | **M** | **F** | **M** | **F** |
|   | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** | **Coef** | **CI Lower** | **CI Upper** |
| ln\_pfoa | -0.28 | -0.97 | 0.41 | -0.90 | -1.64 | -0.17 | 0.43 | -0.11 | 0.97 | -0.23 | -0.79 | 0.33 |
| II Q | 0.02 | -1.60 | 1.63 | -0.44 | -2.03 | 1.15 | 0.78 | -0.49 | 2.04 | 0.09 | -1.11 | 1.29 |
| III Q | 0.42 | -1.18 | 2.01 | -1.11 | -2.73 | 0.51 | 0.33 | -0.92 | 1.58 | 0.13 | -1.10 | 1.35 |
| IV Q | -0.69 | -2.26 | 0.88 | -1.62 | -3.34 | 0.11 | 1.17 | -0.06 | 2.39 | -0.15 | -1.46 | 1.15 |
| log\_pfos | -0.49 | -1.54 | 0.56 | -0.53 | -1.61 | 0.55 | 0.24 | -0.58 | 1.07 | -0.19 | -1.01 | 0.62 |
| II Q | -0.74 | -2.26 | 0.78 | 0.11 | -1.45 | 1.67 | 1.01 | -0.18 | 2.20 | 0.29 | -0.88 | 1.46 |
| III Q | -0.16 | -1.75 | 1.42 | 0.12 | -1.50 | 1.73 | 1.52 | 0.29 | 2.76 | 0.14 | -1.07 | 1.36 |
| IV Q | -0.75 | -2.30 | 0.80 | -1.15 | -2.77 | 0.48 | 0.51 | -0.70 | 1.72 | -0.74 | -1.96 | 0.48 |
| log\_pfhxs | -0.43 | -1.29 | 0.44 | -1.18 | -2.08 | -0.29 | 0.52 | -0.15 | 1.19 | -0.33 | -1.01 | 0.34 |
| II Q | 0.32 | -1.26 | 1.90 | -1.48 | -3.02 | 0.06 | 0.30 | -0.93 | 1.54 | 0.96 | -0.21 | 2.12 |
| III Q | -0.38 | -2.01 | 1.25 | -2.66 | -4.27 | -1.05 | 0.63 | -0.64 | 1.90 | -0.57 | -1.79 | 0.65 |
| IV Q | -0.60 | -2.20 | 1.01 | -1.86 | -3.54 | -0.18 | 0.73 | -0.52 | 1.99 | -0.32 | -1.59 | 0.96 |
| log\_pfna | -0.04 | -2.16 | 2.09 | -0.29 | -2.29 | 1.71 | 0.41 | -1.25 | 2.07 | -0.97 | -2.47 | 0.54 |
| medium | -0.70 | -2.05 | 0.64 | -0.12 | -1.62 | 1.39 | 0.80 | -0.25 | 1.84 | -0.29 | -1.42 | 0.85 |
| high | 0.75 | -1.35 | 2.85 | -1.23 | -3.27 | 0.80 | -0.26 | -1.90 | 1.38 | -1.60 | -3.13 | -0.07 |

Figure S1. Flow-chart of study population

