

1 **Association between dietary inflammatory index and serum perfluoroalkyl and polyfluoroalkyl**
2 **substances concentrations: evidence from NANHES 2007–2018**

3 Ren Zhou[#], Jiali Peng[#], Lei Zhang, Yu Sun, Jia Yan^{*}, and Hong Jiang^{*}

4 Department of Anesthesiology, The Ninth People's Hospital of Shanghai, Jiao Tong University

5 School of Medicine, Shanghai, 200011, PR China

6 *** Corresponding author**

7 Hong Jiang

8 The Ninth People's Hospital of Shanghai, Jiao Tong University School of Medicine

9 No. 639 Zhizaoju Road, Shanghai, 200011, PR China.

10 Email: Jianghongjiuyuan@163.com

11 Jia Yan

12 The Ninth People's Hospital of Shanghai, Jiao Tong University School of Medicine

13 No. 639 Zhizaoju Road, Shanghai, 200011, PR China.

14 Email: mzkyanj@163.com

15 [#]: Ren Zhou and Jiali Peng contributed equally to this work.

16

17

18

19

20

21

22

23

24

25

26

Table S1: Association between different food parameters and PFAS

OUTCOME	Food parameters	Model 1		Model 2	
		β (95% CI)	p.val	β (95% CI)	p.val
Sum-PFAS	Alcohol	0.047 (-0.001, 0.095)	0.057	0.021 (-0.033, 0.074)	0.441
Sum-PFAS	Beta-carotene	0.031 (-0.012, 0.074)	0.156	0.03 (-0.018, 0.079)	0.218
Sum-PFAS	Carbohydrate	-0.06 (-0.115, -0.005)	0.032	-0.008 (-0.063, 0.047)	0.767
Sum-PFAS	Cholesterol	0.022 (-0.023, 0.068)	0.328	0.027 (-0.027, 0.081)	0.322
Sum-PFAS	Dietary fiber	-0.1 (-0.151, -0.049)	0	-0.081 (-0.137, -0.024)	0.006
Sum-PFAS	Energy	-0.112 (-0.167, -0.057)	<0.001	-0.101 (-0.169, -0.033)	0.004
Sum-PFAS	Iron	-0.062 (-0.109, -0.014)	0.011	-0.059 (-0.112, -0.007)	0.027
Sum-PFAS	Magnesium	-0.07 (-0.122, -0.018)	0.009	-0.061 (-0.121, 0)	0.051
Sum-PFAS	n-3 PUFAs	0.083 (0.031, 0.135)	0.002	0.063 (0.013, 0.113)	0.014
Sum-PFAS	n-6 PUFAs	-0.032 (-0.085, 0.02)	0.227	-0.012 (-0.073, 0.049)	0.693
Sum-PFAS	Niacin	0.044 (-0.01, 0.098)	0.107	0.044 (-0.014, 0.102)	0.135
Sum-PFAS	Protein	0.034 (-0.022, 0.09)	0.226	0.056 (-0.007, 0.119)	0.082
Sum-PFAS	Riboflavin	-0.039 (-0.091, 0.012)	0.13	-0.033 (-0.088, 0.022)	0.239
Sum-PFAS	Selenium	0.03 (-0.032, 0.092)	0.343	0.048 (-0.027, 0.123)	0.205
Sum-PFAS	Thiamin	-0.033 (-0.091, 0.025)	0.259	-0.033 (-0.093, 0.027)	0.276
Sum-PFAS	Total fat	-0.1 (-0.158, -0.042)	0.001	-0.072 (-0.136, -0.008)	0.028
Sum-PFAS	Total folate	-0.049 (-0.102, 0.004)	0.07	-0.047 (-0.101, 0.007)	0.089
Sum-PFAS	Total MUFAs	-0.071 (-0.127, -0.015)	0.014	-0.034 (-0.094, 0.027)	0.269
Sum-PFAS	Total PUFAs	-0.028 (-0.08, 0.023)	0.275	-0.003 (-0.061, 0.054)	0.914
Sum-PFAS	Total SFAs	-0.094 (-0.149, -0.039)	0.001	-0.076 (-0.143, -0.01)	0.024
Sum-PFAS	Vitamin A	-0.05 (-0.099, -0.001)	0.043	-0.052 (-0.108, 0.005)	0.072
Sum-PFAS	Vitamin B12	0.008 (-0.033, 0.05)	0.693	0.003 (-0.043, 0.05)	0.885
Sum-PFAS	Vitamin B6	-0.013 (-0.065, 0.039)	0.622	-0.022 (-0.082, 0.039)	0.479
Sum-PFAS	Vitamin C	0.004 (-0.033, 0.042)	0.818	0.003 (-0.04, 0.046)	0.876
Sum-PFAS	Vitamin D (D2 + D3)	-0.063 (-0.107, -0.019)	0.006	-0.076 (-0.124, -0.027)	0.003
Sum-PFAS	Vitamin E	-0.049 (-0.094, -0.003)	0.036	-0.05 (-0.102, 0.001)	0.056
Sum-PFAS	Zinc	-0.03 (-0.089, 0.028)	0.301	-0.027 (-0.087, 0.034)	0.385
PFOS	Alcohol	0.032 (-0.024, 0.088)	0.264	0.006 (-0.057, 0.069)	0.848
PFOS	Beta-carotene	0.028 (-0.024, 0.079)	0.292	0.026 (-0.032, 0.085)	0.371
PFOS	Carbohydrate	-0.058 (-0.117, 0.001)	0.054	-0.012 (-0.07, 0.046)	0.684
PFOS	Cholesterol	0.032 (-0.019, 0.082)	0.214	0.033 (-0.026, 0.091)	0.269
PFOS	Dietary fiber	-0.12 (-0.18, -0.061)	<0.001	-0.099 (-0.166, -0.032)	0.004
PFOS	Energy	-0.109 (-0.173, -0.045)	0.001	-0.105 (-0.184, -0.027)	0.009
PFOS	Iron	-0.075 (-0.13, -0.02)	0.008	-0.081 (-0.143, -0.019)	0.012
PFOS	Magnesium	-0.097 (-0.157, -0.037)	0.002	-0.082 (-0.154, -0.01)	0.025
PFOS	n-3 PUFAs	0.096 (0.035, 0.157)	0.003	0.075 (0.016, 0.135)	0.014
PFOS	n-6 PUFAs	-0.026 (-0.087, 0.036)	0.411	-0.006 (-0.079, 0.067)	0.869
PFOS	Niacin	0.05 (-0.014, 0.114)	0.124	0.048 (-0.023, 0.119)	0.182
PFOS	Protein	0.026 (-0.036, 0.088)	0.406	0.051 (-0.021, 0.122)	0.161
PFOS	Riboflavin	-0.049 (-0.107, 0.009)	0.096	-0.041 (-0.104, 0.022)	0.2
PFOS	Selenium	0.04 (-0.029, 0.109)	0.255	0.05 (-0.034, 0.135)	0.236
PFOS	Thiamin	-0.038 (-0.103, 0.028)	0.253	-0.043 (-0.114, 0.028)	0.232
PFOS	Total fat	-0.083 (-0.153, -0.014)	0.019	-0.06 (-0.135, 0.015)	0.118
PFOS	Total folate	-0.063 (-0.123, -0.003)	0.039	-0.062 (-0.125, 0.002)	0.058
PFOS	Total MUFAs	-0.055 (-0.123, 0.012)	0.108	-0.022 (-0.095, 0.051)	0.549
PFOS	Total PUFAs	-0.021 (-0.081, 0.039)	0.482	0.004 (-0.064, 0.073)	0.9
PFOS	Total SFAs	-0.073 (-0.135, -0.012)	0.02	-0.058 (-0.132, 0.016)	0.122
PFOS	Vitamin A	-0.065 (-0.121, -0.01)	0.021	-0.067 (-0.132, -0.002)	0.043
PFOS	Vitamin B12	0.012 (-0.035, 0.059)	0.611	0 (-0.054, 0.055)	0.998
PFOS	Vitamin B6	-0.006 (-0.066, 0.054)	0.843	-0.02 (-0.09, 0.051)	0.581
PFOS	Vitamin C	-0.009 (-0.051, 0.033)	0.68	-0.017 (-0.065, 0.032)	0.491
PFOS	Vitamin D (D2 + D3)	-0.064 (-0.115, -0.013)	0.014	-0.08 (-0.135, -0.024)	0.005
PFOS	Vitamin E	-0.064 (-0.114, -0.014)	0.013	-0.071 (-0.13, -0.012)	0.018
PFOS	Zinc	-0.029 (-0.094, 0.036)	0.373	-0.026 (-0.097, 0.044)	0.459
PFOA	Alcohol	0.07 (0.019, 0.121)	0.007	0.039 (-0.015, 0.094)	0.157
PFOA	Beta-carotene	0.014 (-0.03, 0.058)	0.532	0.024 (-0.023, 0.072)	0.311
PFOA	Carbohydrate	-0.058 (-0.121, 0.005)	0.073	-0.008 (-0.072, 0.056)	0.806
PFOA	Cholesterol	0.004 (-0.039, 0.047)	0.865	0.003 (-0.051, 0.057)	0.906
PFOA	Dietary fiber	-0.08 (-0.127, -0.032)	0.001	-0.064 (-0.115, -0.013)	0.015
PFOA	Energy	-0.085 (-0.137, -0.033)	0.002	-0.071 (-0.135, -0.007)	0.03
PFOA	Iron	-0.058 (-0.103, -0.013)	0.012	-0.044 (-0.092, 0.005)	0.077
PFOA	Magnesium	-0.044 (-0.092, 0.003)	0.067	-0.051 (-0.103, 0.002)	0.06
PFOA	n-3 PUFAs	0.051 (0.009, 0.092)	0.017	0.044 (0.001, 0.086)	0.046
PFOA	n-6 PUFAs	-0.037 (-0.086, 0.013)	0.141	-0.031 (-0.087, 0.025)	0.275
PFOA	Niacin	0.031 (-0.025, 0.087)	0.274	0.041 (-0.016, 0.099)	0.159
PFOA	Protein	0.021 (-0.039, 0.082)	0.483	0.037 (-0.032, 0.106)	0.288
PFOA	Riboflavin	-0.029 (-0.079, 0.021)	0.258	-0.007 (-0.065, 0.05)	0.804
PFOA	Selenium	0.017 (-0.037, 0.072)	0.532	0.045 (-0.018, 0.108)	0.155
PFOA	Thiamin	-0.034 (-0.089, 0.022)	0.233	-0.021 (-0.081, 0.04)	0.496
PFOA	Total fat	-0.09 (-0.142, -0.038)	0.001	-0.082 (-0.142, -0.021)	0.009
PFOA	Total folate	-0.031 (-0.082, 0.019)	0.219	-0.021 (-0.074, 0.032)	0.438
PFOA	Total MUFAs	-0.094 (-0.151, -0.038)	0.001	-0.068 (-0.132, -0.003)	0.041
PFOA	Total PUFAs	-0.034 (-0.083, 0.015)	0.171	-0.03 (-0.086, 0.027)	0.295
PFOA	Total SFAs	-0.083 (-0.14, -0.026)	0.005	-0.072 (-0.135, -0.009)	0.025
PFOA	Vitamin A	-0.04 (-0.085, 0.006)	0.086	-0.036 (-0.087, 0.016)	0.174
PFOA	Vitamin B12	-0.006 (-0.054, 0.042)	0.808	-0.003 (-0.055, 0.048)	0.903
PFOA	Vitamin B6	-0.035 (-0.086, 0.015)	0.169	-0.033 (-0.09, 0.025)	0.259
PFOA	Vitamin C	-0.008 (-0.048, 0.031)	0.674	-0.007 (-0.057, 0.043)	0.781
PFOA	Vitamin D (D2 + D3)	-0.069 (-0.114, -0.024)	0.003	-0.068 (-0.12, -0.016)	0.011
PFOA	Vitamin E	-0.058 (-0.106, -0.011)	0.016	-0.063 (-0.112, -0.015)	0.011
PFOA	Zinc	-0.048 (-0.102, 0.005)	0.076	-0.039 (-0.101, 0.024)	0.219
PFNA	Alcohol	0.11 (0.055, 0.166)	<0.001	0.094 (0.032, 0.155)	0.003
PFNA	Beta-carotene	0.014 (-0.034, 0.062)	0.563	0.001 (-0.056, 0.058)	0.973
PFNA	Carbohydrate	-0.068 (-0.136, 0)	0.051	-0.043 (-0.113, 0.028)	0.233
PFNA	Cholesterol	0.093 (0.039, 0.147)	0.001	0.104 (0.045, 0.162)	0.001
PFNA	Dietary fiber	-0.156 (-0.215, -0.098)	<0.001	-0.145 (-0.211, -0.078)	<0.001
PFNA	Energy	-0.078 (-0.136, -0.02)	0.009	-0.085 (-0.155, -0.015)	0.017
PFNA	Iron	-0.061 (-0.127, 0.004)	0.066	-0.048 (-0.117, 0.021)	0.172
PFNA	Magnesium	-0.081 (-0.146, -0.016)	0.016	-0.083 (-0.157, -0.009)	0.028
PFNA	n-3 PUFAs	0.141 (0.084, 0.198)	<0.001	0.124 (0.068, 0.18)	<0.001
PFNA	n-6 PUFAs	-0.028 (-0.086, 0.029)	0.329	-0.018 (-0.089, 0.052)	0.605
PFNA	Niacin	0.055 (-0.006, 0.116)	0.078	0.045 (-0.025, 0.115)	0.204
PFNA	Protein	0.085 (0.012, 0.157)	0.022	0.095 (0.015, 0.175)	0.021
PFNA	Riboflavin	-0.059 (-0.128, 0.009)	0.089	-0.063 (-0.129, 0.002)	0.058
PFNA	Selenium	0.059 (-0.014, 0.131)	0.113	0.079 (-0.009, 0.167)	0.077
PFNA	Thiamin	-0.032 (-0.099, 0.034)	0.339	-0.03 (-0.097, 0.037)	0.38
PFNA	Total fat	-0.074 (-0.138, -0.01)	0.024	-0.073 (-0.155, 0.008)	0.078

PFNA	Total folate	-0.072 (-0.135, -0.009)	0.026	-0.066 (-0.14, 0.007)	0.076
PFNA	Total MUFAs	-0.051 (-0.114, 0.011)	0.106	-0.02 (-0.089, 0.049)	0.558
PFNA	Total PUFAs	-0.019 (-0.077, 0.04)	0.521	-0.005 (-0.071, 0.061)	0.876
PFNA	Total SFAs	-0.093 (-0.16, -0.026)	0.007	-0.097 (-0.172, -0.023)	0.011
PFNA	Vitamin A	-0.056 (-0.117, 0.005)	0.069	-0.063 (-0.132, 0.007)	0.075
PFNA	Vitamin B12	-0.002 (-0.056, 0.051)	0.927	-0.006 (-0.067, 0.054)	0.832
PFNA	Vitamin B6	-0.002 (-0.064, 0.06)	0.942	-0.013 (-0.087, 0.062)	0.732
PFNA	Vitamin C	0.004 (-0.045, 0.054)	0.861	0.005 (-0.048, 0.057)	0.86
PFNA	Vitamin D (D2 + D3)	-0.066 (-0.12, -0.011)	0.019	-0.079 (-0.139, -0.02)	0.009
PFNA	Vitamin E	-0.023 (-0.082, 0.037)	0.453	-0.016 (-0.084, 0.052)	0.644
PFNA	Zinc	-0.056 (-0.125, 0.012)	0.104	-0.055 (-0.129, 0.02)	0.15
PFHxS	Alcohol	0.059 (-0.006, 0.123)	0.075	0.03 (-0.043, 0.102)	0.416
PFHxS	Beta-carotene	0.042 (-0.014, 0.098)	0.137	0.043 (-0.019, 0.105)	0.172
PFHxS	Carbohydrate	-0.063 (-0.143, 0.018)	0.126	0.008 (-0.077, 0.093)	0.851
PFHxS	Cholesterol	-0.038 (-0.097, 0.022)	0.21	-0.027 (-0.1, 0.045)	0.453
PFHxS	Dietary fiber	-0.039 (-0.098, 0.02)	0.192	-0.011 (-0.079, 0.056)	0.74
PFHxS	Energy	-0.099 (-0.177, -0.022)	0.013	-0.068 (-0.161, 0.025)	0.148
PFHxS	Iron	-0.036 (-0.102, 0.03)	0.278	-0.026 (-0.099, 0.047)	0.476
PFHxS	Magnesium	-0.02 (-0.083, 0.042)	0.517	-0.002 (-0.078, 0.074)	0.959
PFHxS	n-3 PUFAs	0.017 (-0.045, 0.079)	0.589	-0.002 (-0.066, 0.062)	0.946
PFHxS	n-6 PUFAs	-0.001 (-0.068, 0.067)	0.986	0.022 (-0.049, 0.093)	0.543
PFHxS	Niacin	0.045 (-0.022, 0.111)	0.185	0.037 (-0.039, 0.113)	0.333
PFHxS	Protein	0.04 (-0.032, 0.111)	0.272	0.046 (-0.037, 0.128)	0.273
PFHxS	Riboflavin	0.017 (-0.042, 0.076)	0.562	0.006 (-0.062, 0.074)	0.86
PFHxS	Selenium	0.003 (-0.076, 0.082)	0.937	0.037 (-0.052, 0.126)	0.406
PFHxS	Thiamin	-0.018 (-0.094, 0.058)	0.636	-0.022 (-0.102, 0.058)	0.586
PFHxS	Total fat	-0.151 (-0.224, -0.079)	<0.001	-0.088 (-0.17, -0.006)	0.036
PFHxS	Total folate	-0.007 (-0.074, 0.059)	0.828	0.002 (-0.066, 0.07)	0.946
PFHxS	Total MUFAs	-0.104 (-0.174, -0.033)	0.005	-0.056 (-0.141, 0.029)	0.197
PFHxS	Total PUFAs	0.002 (-0.065, 0.07)	0.946	0.036 (-0.036, 0.108)	0.32
PFHxS	Total SFAs	-0.155 (-0.227, -0.083)	<0.001	-0.123 (-0.204, -0.043)	0.003
PFHxS	Vitamin A	-0.009 (-0.065, 0.046)	0.743	-0.02 (-0.084, 0.044)	0.539
PFHxS	Vitamin B12	0.021 (-0.04, 0.082)	0.49	0.01 (-0.059, 0.08)	0.769
PFHxS	Vitamin B6	0.002 (-0.063, 0.066)	0.961	-0.011 (-0.087, 0.065)	0.768
PFHxS	Vitamin C	0.054 (0, 0.108)	0.05	0.07 (0.009, 0.132)	0.026
PFHxS	Vitamin D (D2 + D3)	-0.052 (-0.107, 0.003)	0.063	-0.069 (-0.137, -0.002)	0.044
PFHxS	Vitamin E	-0.012 (-0.069, 0.045)	0.674	-0.004 (-0.07, 0.062)	0.9
PFHxS	Zinc	0.006 (-0.066, 0.079)	0.859	-0.006 (-0.074, 0.061)	0.855
PFDA	Alcohol	0.119 (0.057, 0.182)	<0.001	0.089 (0.017, 0.161)	0.016
PFDA	Beta-carotene	0.094 (0.045, 0.143)	<0.001	0.072 (0.016, 0.127)	0.012
PFDA	Carbohydrate	-0.139 (-0.206, -0.072)	<0.001	-0.109 (-0.187, -0.031)	0.007
PFDA	Cholesterol	0.121 (0.066, 0.177)	<0.001	0.114 (0.048, 0.18)	0.001
PFDA	Dietary fiber	-0.066 (-0.118, -0.014)	0.013	-0.067 (-0.123, -0.01)	0.021
PFDA	Energy	-0.078 (-0.136, -0.02)	0.009	-0.1 (-0.17, -0.031)	0.005
PFDA	Iron	-0.075 (-0.136, -0.013)	0.018	-0.062 (-0.129, 0.006)	0.072
PFDA	Magnesium	-0.008 (-0.072, 0.057)	0.812	-0.009 (-0.081, 0.064)	0.81
PFDA	n-3 PUFAs	0.187 (0.133, 0.241)	<0.001	0.176 (0.123, 0.228)	<0.001
PFDA	n-6 PUFAs	-0.026 (-0.087, 0.035)	0.397	-0.016 (-0.084, 0.052)	0.647
PFDA	Niacin	0.068 (-0.001, 0.138)	0.052	0.066 (-0.01, 0.142)	0.087
PFDA	Protein	0.093 (0.025, 0.161)	0.008	0.12 (0.046, 0.194)	0.002
PFDA	Riboflavin	-0.064 (-0.131, 0.003)	0.061	-0.038 (-0.106, 0.03)	0.273
PFDA	Selenium	0.083 (0.01, 0.155)	0.026	0.085 (0.004, 0.166)	0.04
PFDA	Thiamin	-0.03 (-0.09, 0.031)	0.335	-0.027 (-0.09, 0.037)	0.406
PFDA	Total fat	-0.047 (-0.118, 0.025)	0.198	-0.037 (-0.116, 0.042)	0.358
PFDA	Total folate	-0.06 (-0.122, 0.003)	0.062	-0.062 (-0.129, 0.004)	0.066
PFDA	Total MUFAs	-0.026 (-0.091, 0.039)	0.425	-0.008 (-0.076, 0.06)	0.816
PFDA	Total PUFAs	-0.016 (-0.08, 0.047)	0.612	-0.005 (-0.072, 0.063)	0.892
PFDA	Total SFAs	-0.07 (-0.134, -0.006)	0.032	-0.068 (-0.139, 0.003)	0.061
PFDA	Vitamin A	-0.05 (-0.106, 0.006)	0.08	-0.045 (-0.107, 0.018)	0.16
PFDA	Vitamin B12	0.01 (-0.043, 0.062)	0.719	0.026 (-0.035, 0.086)	0.405
PFDA	Vitamin B6	0.025 (-0.037, 0.087)	0.419	0.028 (-0.042, 0.098)	0.427
PFDA	Vitamin C	0.01 (-0.034, 0.054)	0.649	-0.009 (-0.057, 0.04)	0.726
PFDA	Vitamin D (D2 + D3)	-0.051 (-0.1, -0.002)	0.043	-0.059 (-0.113, -0.005)	0.034
PFDA	Vitamin E	-0.055 (-0.113, 0.003)	0.063	-0.063 (-0.128, 0.002)	0.058
PFDA	Zinc	-0.011 (-0.068, 0.047)	0.715	0.009 (-0.059, 0.077)	0.79

Model 1 was adjusted for survey cycle, sex, age, race/ethnicity, education level, smoking status, BMI, serum cotinine.

Model 2 was adjusted for survey cycle, sex, age, race/ethnicity, education level, smoking status, BMI, serum cotinine, PIR, alcohol consumption.

Abbreviations: PFAS, perfluoroalkyl and polyfluoroalkyl substances; PFOA, perfluorooctanoic acid; PFNA, perfluorononanoic acid; PFOS, perfluorooctane sulfonic acid; PFDA, perfluorodecanoic acid; PFHxS, perfluorohexane sulfonic acid; DII, dietary inflammatory index; BMI, body mass index; PIR, poverty income ratio; CI, confidence interval.

28
29
30
31

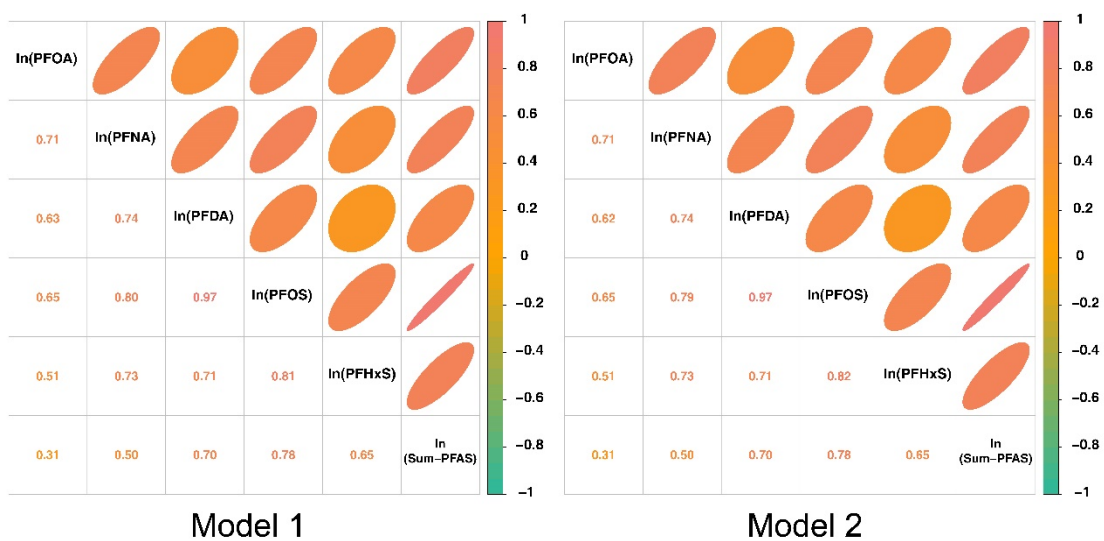
Table S2: Summary table for interaction analysis

	NC	TBIL	ALP	Serum iron
PFDA		+		++*
PFHxS	++			
PFNA	++*	+		++
PFOA				++
PFOS	++		++	
Sum-PFAS	++		++	

++*: implying the existence of a trend towards a greater effect of PFAS on the marker at higher DII, but the interaction P value more than 0.05;
 ++*: implying the presence of a significant greater effect of PFAS at higher DII levels on the marker;
 ++*: implying a significant interaction between PFAS and DII for this index, but the exact interaction is difficult to summarize.

32
 33
 34
 35
 36
 37
 38

Figure S1:

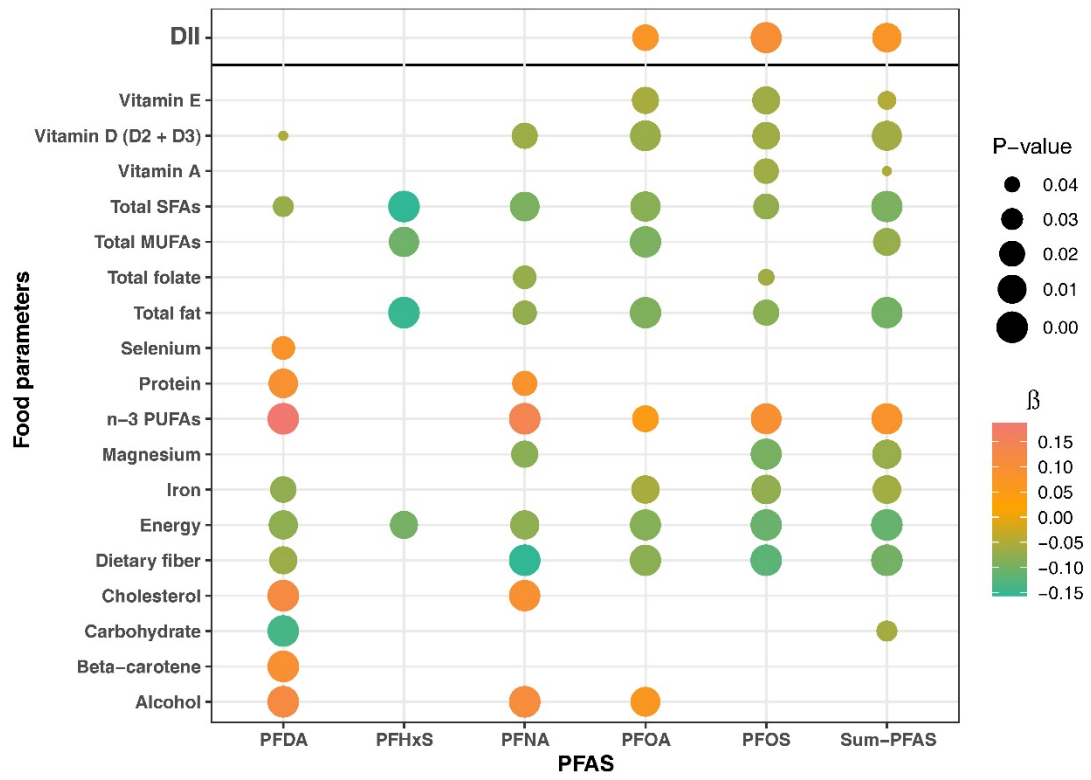


39
 40
 41
 42

43

44 **Figure S2:**

45

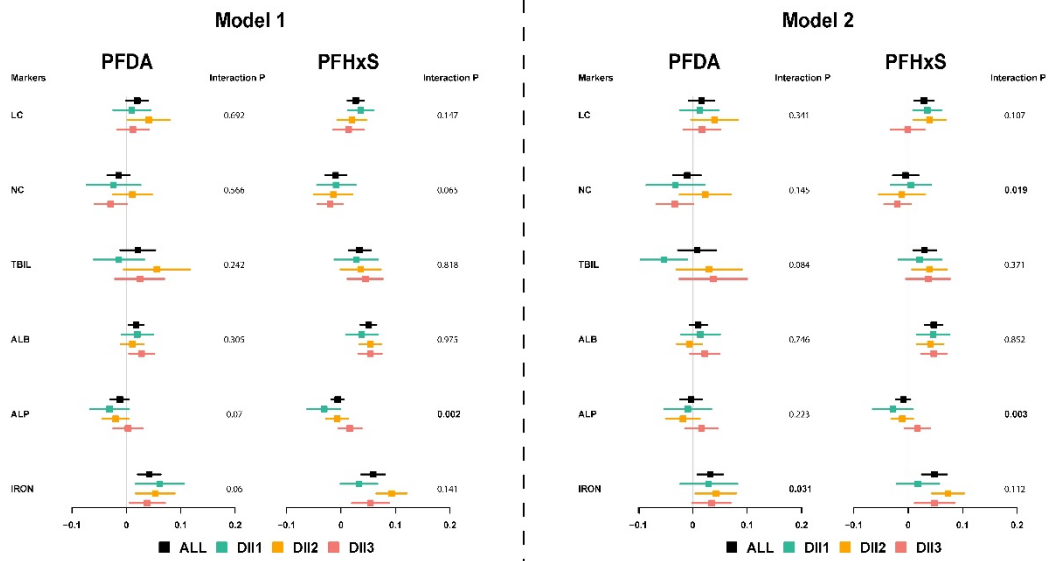


46

47

48

49 **Figure S3:**

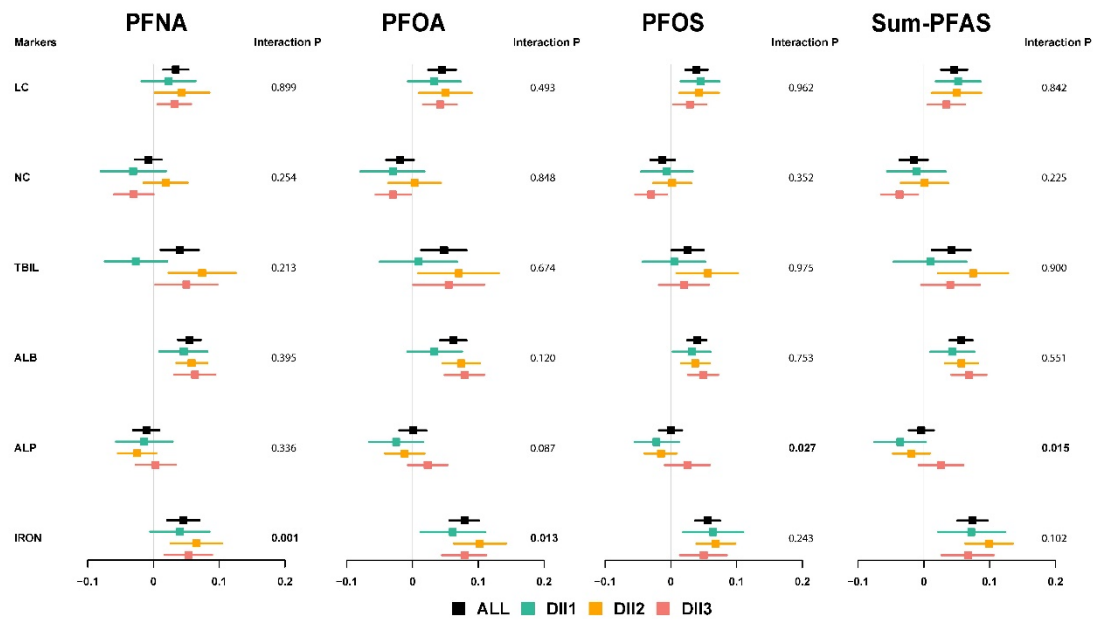


50

51

52 **Figure S4:**

53



54

55

56

57

58

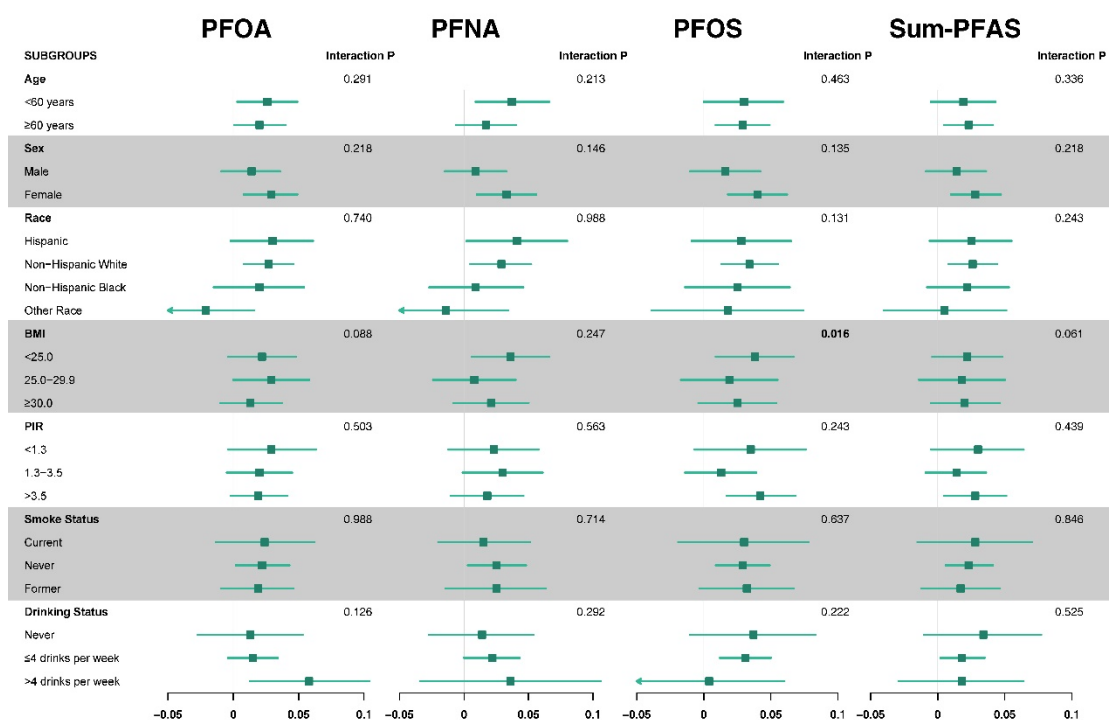
59

60

61

62

63 **Figure S5:**



64

65

66 **Figure Legends:**

67 **Figure S1:** Pairwise pearson correlations between serum PFAS concentrations.

68 **Figure S2:** Association between blood PFAS and food parameters used for DII in Model 1. Each food
 69 parameter was split into dichotomous variables based on the median. For DII, the results are shown for
 70 T1 vs T3. Model was adjusted for survey cycle, sex, age, race/ethnicity, education level, smoking status,
 71 BMI, and serum cotinine.

72 **Figure S3:** Relationship between PFHxS, PFDA and lymphocyte counts, neutrophil counts, total serum
 73 bilirubin, and serum albumin with different levels of DII. Model 1 was adjusted for survey cycle, sex,
 74 age, race/ethnicity, education level, smoking status, BMI, serum cotinine; Model was adjusted
 75 covariates in model 1 and added PIR, and alcohol consumption.

76 CI, confidence interval; PFAS, Perfluoroalkyl and polyfluoroalkyl substances; PFHxS,
 77 Perfluorohexane sulfonic acid; PFDA, Perfluorodecanoic acid. DII, Dietary inflammatory index; LC,
 78 lymphocyte counts; NC, neutrophil counts; TBIL, total serum bilirubin; ALB, serum albumin; ALP,
 79 alkaline phosphatase; BMI, Body mass index; PIR, Poverty income ratio.

80 **Figure S4:** Relationship between PFAS and lymphocyte counts, neutrophil counts, total serum
 81 bilirubin, and serum albumin with different levels of DII in **Model 1**. Model was adjusted for survey
 82 cycle, sex, age, race/ethnicity, education level, smoking status, BMI, and serum cotinine.

83 CI, confidence interval; PFAS, Perfluoroalkyl and polyfluoroalkyl substances; PFOA,
 84 Perfluorooctanoic acid; PFNA, Perfluorononanoic acid; PFOS, Perfluorooctane sulfonic acid; DII,
 85 Dietary inflammatory index; LC, lymphocyte counts; NC, neutrophil counts; TBIL, total serum
 86 bilirubin; ALB, serum albumin; ALP, alkaline phosphatase; BMI, Body mass index; PIR, Poverty
 87 income ratio.

88 **Figure S5:** Relationship between PFAS and DII in different subgroups in **Model 1**. Model was
89 adjusted for survey cycle, sex, age, race/ethnicity, education level, smoking status, BMI, and serum
90 cotinine. The variable used to split the data were not adjusted. CI, confidence interval; PFAS,
91 Perfluoroalkyl and polyfluoroalkyl substances; PFOA, Perfluorooctanoic acid; PFNA,
92 Perfluorononanoic acid; PFOS, Perfluorooctane sulfonic acid; DII, Dietary inflammatory index; BMI,
93 Body mass index; PIR, Poverty income ratio.
94