Supplemental Table S1. USDA food codes and logic for apportioning dietary intake

Food Group	*USDA food code and additional logic*
Milk and Milk Products	DR1IFDCD = 1
Meat, poultry, mixtures	DR1IFDCD = 2
Eggs	DR1IFDCD = 3
Legumes, nuts, and seeds	DR1IFDCD = 4
Grain products	DR1IFDCD = 5
Fruits	DR1IFDCD = 6
Vegetables	DR1IFDCD = 7
Fats, oils, and salad dressings	DR1IFDCD = 8
Sugars, sweets, and beverages	DR1IFDCD = 9
Cured meats	DR1IFDCD = 22107, 223001, 223110, 22321110, 22421, 2243, 226002, 22602, 22601000, 22602, 23321050, 25160110, 21603 Then subtract total mass from DR1IFDCD = 2
Luncheon meats and hot dogs	DR1IFDCD = 25220010, 252302, 252303, 25230410, 25230510, 25230520, 25230530, 25230540, 25230550, 252307, 252309. 25231110,2756000,2521, 271202, 27420040, 275603, 27564 Then subtract total mass from DR1IFDCD = 2 DR1IFDCD = 41811600, 41811400 Then subtract total mass from DR1IFDCD=4
Tap water	DR1IFDCD = 94000100 Then subtract total mass from DR1IFDCD=9

Supplemental Table S2. Nitromethane sample-weighted geometric means (ng/L) and selected percentiles for non-users, NHANES 2007-2012 (N=5,345)

Demographic Category		*N*[a]	*GM*[b] *(ng/L)*	*Selected Percentiles*						
				5th	*10th*	*25th*	*50th*	*75th*	*90th*	*95th*
	All	5345	646 [627, 665][c]	373 [362, 384]	415 [404, 427]	502 [488, 516]	625 [608, 642]	797 [768, 826]	1020 [983, 1060]	1270 [1210, 1330]
Age (years)	12-19	1,045	572 [552, 593]	350 [328, 372]	384 [367, 401]	459 [433, 484]	556 [534, 579]	709 [679, 739]	870 [837, 903]	983 [925, 1040]
	20-39	1,393	628 [605, 651]	372 [352, 393]	424 [402, 446]	501 [481, 521]	619 [600, 639]	761 [732, 790]	937 [893, 981]	1080 [1020, 1140]
	40-59	1,322	650 [626, 674]	386 [365, 408]	415 [398, 433]	508 [483, 534]	631 [606, 657]	812 [779, 845]	1030 [985, 1080]	1250 [1150, 1360]
	≥60	1,585	713 [680, 746]	386 [359, 413]	442 [421, 462]	535 [506, 565]	669 [631, 707]	885 [819, 951]	1310 [1210, 1410]	1610 [1450, 1770]
Sex	Male	2505	631 [611, 652]	368 [358, 378]	409 [399, 419]	497 [479, 515]	614 [593, 636]	773 [746, 800]	992 [940, 1040]	1190 [1100, 1280]
	Female	2840	658 [637, 679]	382 [366, 398]	421 [409, 434]	510 [493, 526]	635 [614, 656]	814 [782, 846]	1050 [1000, 1100]	1320 [1250, 1390]
Race/ Ethnicity	Non-Hispanic White	2,264	624 [604, 644]	367 [356, 379]	409 [401, 417]	494 [476, 511]	610 [590, 630]	759 [730, 788]	974 [925, 1020]	1190 [1100, 1270]
	Non-Hispanic Black	1,078	705 [673, 737]	401 [377, 425]	443 [426, 460]	535 [511, 559]	673 [634, 712]	870 [819, 920]	1220 [1110, 1330]	1590 [1430, 1760]
	Mexican American	1,008	672 [631, 713]	375 [351, 399]	422 [386, 457]	519 [483, 555]	649 [603, 696]	836 [792, 880]	1080 [1010, 1160]	1270 [1120, 1420]
	Other Race	995	705 [664, 745]	391 [350, 432]	450 [415, 485]	544 [505, 583]	692 [649, 735]	884 [842, 927]	1120 [1010, 1220]	1360 [1210, 1500]
BMI	Underweight	70	568 [510, 626]	327[d]	375[d]	467 [410, 524]	551 [488, 614]	679 [553, 804]	840 [714, 966]	943 [550, 1340]
	Healthy weight	1724	610 [587, 633]	358 [345, 371]	398 [381, 414]	473 [455, 491]	588 [564, 613]	754 [714, 793]	975 [921, 1030]	1140 [1040, 1230]
	Overweight/ Obese	3551	666 [646, 685]	391 [376, 407]	433 [421, 445]	523 [508, 538]	639 [619, 659]	812 [783, 841]	1050 [1000, 1100]	1330 [1260, 1390]
Poverty Status	No	4252	648 [628, 667]	379 [365, 393]	420 [408, 432]	508 [493, 522]	628 [610, 646]	793 [765, 820]	1020 [976, 1060]	1270 [1200, 1340]
	Yes	1093	632 [591, 674]	356 [334, 378]	390 [368, 411]	478 [446, 510]	601 [556, 646]	818 [760, 876]	1060 [988, 1140]	1300 [1120, 1480]

[a]Sample size. [b]Geometric mean. [c]95% confidence interval range. [d]Could not determine 95%CI

Supplemental Table S3. Nitromethane sample-weighted geometric means (ng/L) and selected percentiles for exclusive smokers, NHANES 2007-2012 (N=1,385)

Demographic Category		*N*[a]	*GM*[b] *(ng/L)*	*Selected Percentiles*						
				5th	*10th*	*25th*	*50th*	*75th*	*90th*	*95th*
	All	1385	789 [767, 811][c]	470 [445, 495]	529 [502, 555]	633 [610, 656]	774 [753, 796]	955 [927, 982]	1220 [1130, 1300]	1410 [1330, 1500]
Age (years)	12-19	112	691 [637, 746]	422[d]	445[d]	559 [472, 645]	668 [630, 706]	829 [756, 902]	1030 [809, 1240]	1320 [939, 1700]
	20-39	545	765 [739, 792]	468 [423, 513]	523 [494, 552]	631 [607, 654]	750 [719, 782]	927 [876, 978]	1090 [1050, 1120]	1290 [1130, 1450]
	40-59	472	793 [764, 822]	470 [427, 512]	530 [481, 579]	630 [595, 665]	781 [748, 814]	945 [906, 984]	1230 [1120, 1330]	1380 [1290, 1480]
	≥60	256	902 [841, 962]	511 [485, 538]	549 [482, 615]	696 [633, 759]	885 [822, 948]	1150 [998, 1300]	1430 [1300, 1560]	1670 [1070, 2260]
Sex	Male	826	786 [762, 810]	459 [419, 500]	522 [493, 550]	628 [610, 646]	773 [752, 795]	951 [917, 985]	1210 [1120, 1300]	1440 [1350, 1540]
	Female	559	793 [755, 831]	472 [425, 520]	540 [498, 582]	645 [605, 685]	774 [730, 819]	956 [914, 999]	1240 [1150, 1340]	1360 [1280, 1450]
Race/ Ethnicity	Non-Hispanic White	725	777 [751, 804]	458 [421, 496]	516 [490, 542]	627 [597, 658]	772 [745, 798]	954 [920, 988]	1190 [1090, 1300]	1350 [1280, 1420]
	Non-Hispanic Black	349	870 [826, 914]	502 [450, 554]	583 [542, 625]	683 [644, 722]	853 [812, 894]	1040 [955, 1120]	1420 [1160, 1680]	1830 [1430, 2230]
	Mexican American	141	802 [738, 865]	471 [374, 569]	563 [497, 629]	634 [595, 673]	749 [693, 804]	946 [824, 1070]	1340 [1090, 1600]	1580 [1270, 1880]
	Other Race	170	755 [724, 787]	489 [371, 607]	545 [500, 591]	632 [592, 672]	729 [704, 754]	900 [859, 941]	1070 [933, 1210]	1250 [1040, 1460]
BMI	Underweight	45	703 [622, 784]	320[d]	444[d]	613 [507, 719]	736 [649, 822]	834 [736, 933]	988 [590, 1390]	1120 [271, 1980]
	Healthy weight	475	757 [722, 792]	423 [385, 462]	496 [451, 541]	608 [564, 651]	745 [710, 779]	918 [860, 977]	1190 [1090, 1290]	1410 [1290, 1540]
	Overweight/Obese	865	811 [792, 831]	495 [467, 522]	555 [532, 578]	647 [626, 667]	790 [763, 816]	965 [938, 992]	1260 [1180, 1340]	1430 [1360, 1510]
Poverty Status	No	926	784 [761, 806]	472 [443, 501]	528 [499, 558]	632 [606, 658]	773 [747, 798]	948 [919, 978]	1200 [1090, 1300]	1380 [1290, 1460]
	Yes	459	804 [767, 842]	446 [392, 500]	530 [480, 581]	635 [600, 671]	785 [747, 822]	988 [929, 1050]	1310 [1170, 1460]	1590 [1330, 1850]

[a]Sample size. [b]Geometric mean. [c]95% confidence interval range. [d]Could not determine 95%CI

Supplemental Table S4. Sample-weighted multiple linear regression model for blood nitromethane (ng/L), where tobacco smoke exposure is represented by serum cotinine (non-users) and self-reported cigarettes per day (CPD; exclusive smokers). The geometric mean of nitromethane used for computing ΔY is 672 ng/L. NHANES 2007-2012 (N=6,464)

Predictor	*Slope [95%CI][a]*	*p-Value[a]*	*ΔY [95% CI][b]*
CPD			
Non-exposed	Ref.[c]	.	Ref.
SHS	0.0452 [0.0182, 0.0722]	0.0015	31.1 [12.8, 49.8]
1-10 CPD	0.2020 [0.1677, 0.2363]	<.0001	150 [123, 178]
11-20 CPD	0.3353 [0.2895, 0.3810]	<.0001	268 [227, 311]
>20 CPD	0.4682 [0.3907, 0.5457]	<.0001	401 [323, 486]
Sex			
Female	0.0554 [0.0330, 0.0777]	<.0001	38.3 [23.0, 53.9]
Male	Ref.	.	Ref.
Age (years)			
12-19	-0.0718 [-0.1039, -0.0396]	<.0001	-46.6 [-65.9, -26.6]
20-39	Ref.	.	Ref.
40-59	0.0321 [0.0042, 0.0600]	0.0249	21.9 [3.30, 41.1]
≥60	0.1438 [0.1040, 0.1835]	<.0001	104 [74.4, 135]
Race/Ethnicity			
Mexican American	0.1134 [0.0552, 0.1716]	0.0003	80.7 [39.2, 125]
Non-Hispanic Black	0.1387 [0.0967, 0.1807]	<.0001	100 [69.0, 132]
Non-Hispanic White	Ref.	.	Ref.
Other Race	0.1350 [0.0869, 0.1831]	<.0001	97.2 [61.9, 134]
BMI			
Healthy weight	Ref.	.	Ref.
Overweight	0.0598 [0.0369, 0.0826]	<.0001	41.4 [25.7, 57.5]
Underweight	-0.1024 [-0.1655, -0.0392]	0.0020	-65.4 [-102, -26.9]
Poverty Status			
No	Ref.	.	Ref.
Yes	-0.0231 [-0.0599, 0.0137]	0.2140	-15.3 [-38.5, 8.69]
NHANES Cycle			
2007-2008	0.0181 [-0.0437, 0.0798]	0.5592	12.3 [-27.7, 54.7]
2009-2010	Ref.	.	Ref.
2011-2012	0.0108 [-0.0371, 0.0587]	0.6534	7.28 [-23.7, 39.8]
Fasting time (hrs)	-0.0011 [-0.0036, 0.0014]	0.3963	-0.715 [-2.35, 0.924]
Food Consumed (kg/day)			
Milk products	-0.0285 [-0.0763, 0.0193]	0.2369	-18.9 [-48.6, 12.3]
Meat, poultry	0.0798 [0.0303, 0.1293]	0.0022	55.9 [21.5, 91.9]

Eggs	-0.0208 [-0.2084, 0.1668]	0.8246	-13.8 [-124, 118]
Legumes, nuts, seeds	0.2151 [0.0766, 0.3536]	0.0030	161 [56.0, 282]
Grain products	0.0532 [0.0107, 0.0958]	0.0152	36.8 [7.96, 66.8]
Fruits	0.0356 [-0.0171, 0.0884]	0.1808	24.4 [-10.5, 61.2]
Vegetables	0.1851 [0.1164, 0.2539]	<.0001	137 [84.2, 193]
Fats, oils, salad dressings	0.1855 [-0.2194, 0.5904]	0.3617	137 [-127, 529]
Sugars, sweets, beverages	-0.0159 [-0.0253, -0.0066]	0.0013	-10.6 [-16.6, -4.57]
Cured meat	0.4670 [0.1066, 0.8273]	0.0122	400 [82.3, 852]
Luncheon meat and hot dogs	0.0673 [-0.1143, 0.2489]	0.4600	46.8 [-69.9, 186]
Tap water	-0.0097 [-0.0221, 0.0027]	0.1238	-6.48 [-14.5, 1.64]

[a]The dependent variable, blood nitromethane (ng/L), was natural log-transformed for the regression model. [b]ΔY is the expected change in nitromethane concentration in ng/L associated with a unit-increase in the predictor at the overall geometric mean, controlling for other predictors in the model. [c]Reference group

Supplemental Table S5. Sample-weighted percentiles of serum cotinine, cigarettes smoked per day, and consumption of select food groups per day, NHANES 2007-2012 (N=6,730)[a]

	Selected Percentiles			
Variable	***50th [95% CI]***	***75th [95% CI]***	***90th [95% CI]***	***95th [95% CI]***
Serum cotinine [ng/mL], non-users (N=5,345)	0.0243 [0.0220, 0.0266]	0.0727 [0.0629, 0.0825]	0.445 [0.336, 0.554]	1.49 [1.09, 1.88]
Serum cotinine [ng/mL], exclusive smokers (N=1,385)	213 [192, 235]	318 [299, 337]	420 [394, 446]	468 [437, 500]
Cigarettes per day (N=1,120)	10.4 [8.88, 12.0]	19.5 [17.2, 21.8]	25.5 [22.0, 29.0]	29.7 [26.2, 33.2]
Food group (kg/day)				
Milk products	0.124 [0.110, 0.138]	0.332 [0.311, 0.353]	0.572 [0.545, 0.599]	0.778 [0.743, 0.813]
Meat, poultry	0.140 [0.133, 0.148]	0.277 [0.266, 0.288]	0.454 [0.440, 0.468]	0.586 [0.557, 0.615]
Eggs	–[b]	–	0.107 [0.0992, 0.115]	0.156 [0.146, 0.165]
Legumes, nuts, seeds	–	0.0160 [0.0115, 0.0204]	0.0922 [0.0809, 0.104]	0.186 [0.171, 0.201]
Grain products	0.257 [0.246, 0.268]	0.438 [0.419, 0.457]	0.668 [0.646, 0.689]	0.817 [0.785, 0.849]
Fruits	0.0532 [0.0294, 0.0770]	0.246 [0.231, 0.262]	0.457 [0.425, 0.489]	0.629 [0.584, 0.675]
Vegetables	0.115 [0.108, 0.123]	0.244 [0.234, 0.254]	0.399 [0.384, 0.415]	0.514 [0.489, 0.538]
Fats, oils, salad dressings	–	0.0142 [0.0130, 0.0154]	0.0343 [0.0302, 0.0384]	0.0588 [0.0567, 0.0609]
Sugars, sweets, beverages	1.36 [1.31, 1.42]	2.21 [2.12, 2.31]	3.26 [3.13, 3.38]	4.07 [3.84, 4.29]
Cured meat	–	–	–	0.0159 [0.0122, 0.0196]
Luncheon meat and hot dogs	–	–	0.0569 [0.0560, 0.0579]	0.110 [0.0997, 0.121]
Tap water	0.118 [0.0171, 0.220]	0.859 [0.771, 0.948]	1.80 [1.71, 1.89]	2.58 [2.37, 2.79]

[a]Same data as in stratified serum cotinine regression models. [b]Not calculated due to insufficient data for reliable estimate