

SUPPLEMENTARY DATA

Supplementary Table 1. Population characteristics and size

Subgroups				Average value of Biomarkers								Percent in the USPSTF Population [‡]	Population (Million)
BMI (kg/m ²)	IFG	Dyslipidemia	Hypertension	BMI (kg/m ²)	FPG (mg / DL)	Total cholesterol (mg / DL)	HDL (mg / DL)	LDL (mg / DL)	Triglycerides (mg / DL)	SBP (mm Hg)	DBP (mm Hg)		
25-30	No [†]	No [†]	No [†]	26.30	95.26	183.00	46.00	123.00	70.00	130.00	76.67	0.07	0.07
25-30	No	No	Yes	27.31	89.68	169.07	56.93	94.23	89.26	130.84	74.46	1.63	1.60
25-30	No	Yes	No	27.38	91.00	213.03	53.55	132.36	135.46	114.58	69.04	22.73	22.28
25-30	No	Yes	Yes	27.42	92.30	221.65	56.03	136.24	147.29	131.98	74.80	7.33	7.19
25-30	Yes	No	No	27.15	104.59	166.68	53.81	96.42	82.14	114.31	66.64	2.71	2.65
25-30	Yes	No	Yes	27.72	107.56	174.36	61.77	94.59	89.92	129.64	75.23	0.99	0.97
25-30	Yes	Yes	No	27.60	105.85	213.76	51.00	134.21	146.22	118.43	70.88	10.00	9.80
25-30	Yes	Yes	Yes	27.60	107.54	206.91	54.39	123.98	142.59	135.89	74.39	5.94	5.82
>30	No [†]	No [†]	No [†]	43.09	91.36	173.78	44.73	113.96	76.49	133.66	77.73	0.16	0.15
>30	No	No	Yes	36.79	91.86	166.27	53.16	95.54	88.02	128.35	74.30	2.17	2.12
>30	No	Yes	No	34.20	92.06	210.50	48.57	131.41	152.52	116.30	69.94	16.20	15.87
>30	No	Yes	Yes	36.08	92.76	202.79	49.67	122.16	154.69	128.90	75.31	7.40	7.25
>30	Yes	No	No	36.79	105.99	165.50	49.88	96.98	93.38	117.80	70.84	2.47	2.42
>30	Yes	No	Yes	37.57	109.87	172.90	51.38	102.66	94.19	131.18	70.99	1.71	1.68
>30	Yes	Yes	No	35.36	106.52	207.17	45.73	129.98	157.36	119.74	71.56	8.98	8.80
>30	Yes	Yes	Yes	36.34	108.77	208.88	49.39	127.42	160.42	131.22	75.17	9.52	9.33

[†] The group absent all three major risk factors, IFG, dyslipidemia, and hypertension, is the subgroup with only metabolic syndrome but none of the other three. Persons with metabolic syndrome usually have at least one of the three major risk factors. Rarely, women who have abdominal obesity and specific blood pressure level (SBP 130 to 140 mm Hg or DBP 85 to 90 mm Hg) with HDL from 40 to 50 mg/dL falls in this category which accounted for 0.23% (0.07% overweight and 0.16% Obese) of the total eligible population

[‡]The total population here is the US adult population eligible for the USPSTF recommendation of 98 million.

SUPPLEMENTARY DATA

Supplementary Table 2. Sensitivity analysis

		Incremental outcomes from no intervention			
		Remaining Life Years	QALY	Total Costs [†]	ICER (\$/QALY)
Base case*		0.019	0.019	\$262	\$13,900
One-way sensitivity analysis					
Simulation horizon of 10 years		0.004	0.010	\$426	\$42,300
Simulation horizon of lifetime		0.038	0.025	\$233	\$9,400
Discount rate of 0%		0.019	0.026	\$133	\$5,200
Discount rate of 5%		0.019	0.016	\$321	\$20,200
Two-way sensitivity analysis					
Effectiveness	Intervention Cost				
Low	Group-only interventions	0.014	0.016	\$120	\$7,700
Low	Base case	0.014	0.016	\$354	\$22,800
Low	Base case + one-time screening	0.014	0.016	\$409	\$26,300
Base	Group-only interventions	0.019	0.019	\$28	\$1,500
Base	Base case + one-time screening	0.019	0.019	\$317	\$16,800
High	Group-only interventions	0.023	0.022	-\$64	Cost saving
High	Base case	0.023	0.022	\$169	\$7,600
High	Base case + one-time screening	0.023	0.022	\$225	\$10,100

Assuming extended effectiveness after intervention

SUPPLEMENTARY DATA

	Remaining Life Years	QALY	Total Costs [†]	ICER (\$/QALY)
Scenario 1**	0.034	0.031	-\$90	-\$2,870
Scenario 2 ^{††}	0.034	0.031	\$365	\$11,627

*Base case - intervention with a mixture of group and individual sessions, no screening, and moderate intervention effectiveness.

[†]The total costs include the intervention and costs associated with treating future CVD, type 2 diabetes, and diabetes-related complications.

** With no additional cost, DM reduction to be 54% in the first year (year of intervention), and after the intervention, to be 30% in the 2nd year and 10% for year 3-5, and 0% after year 5.

^{††} with additional costs (\$200 for 2nd year and \$100 year 3-5), and the same effectiveness as Scenario 1

SUPPLEMENTARY DATA

Supplementary Table 3. Cumulative cases of diabetes, myocardial infarction/cardiac arrest, stroke, and death prevented by implementing the USPSTF-recommended lifestyle counseling program among persons at high risk of cardiovascular disease, by year

Year	Diabetes	MI/Cardiac Arrest	Stroke	Death
1	0	0	0	0
2	1,381,051	15,124	5,890	5,646
3	1,323,850	15,628	6,130	15,728
4	1,269,802	15,981	6,299	25,353
5	1,218,757	16,197	6,401	34,218
6	1,170,609	16,289	6,442	41,739
7	1,125,337	16,313	6,397	51,831
8	1,082,799	16,187	6,270	60,511
9	1,042,844	16,080	6,185	67,884
10	1,005,323	15,859	6,031	73,992
11	970,091	15,544	5,817	78,963
12	937,107	15,147	5,552	84,527
13	906,221	14,674	5,236	88,939
14	877,293	14,139	4,878	92,629
15	850,191	13,548	4,483	95,665
16	825,078	12,910	4,059	91,224
17	801,673	12,377	3,739	95,033
18	779,872	11,780	3,379	97,967
19	759,572	11,131	2,984	100,110
20	740,672	10,437	2,559	101,560
21	723,072	9,708	2,108	102,419
22	706,753	8,949	1,634	103,569
23	691,613	8,160	1,137	104,043
24	677,562	7,349	622	103,983
25	664,515	6,518	92	103,503

*The estimates are based on the total eligible population of 98 million in the United States.