

SUPPLEMENTAL MATERIAL

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eTable 1. Key Variables Included in Each LASSO Covariate Model

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Age, sex and age × sex interaction	✓	✓	✓	✓	✓
Race and ethnicity		✓	✓	✓	✓
Socioeconomic-related variables		✓	✓	✓	✓
Behavioral-related behaviors		✓	✓	✓	✓
Medical conditions <i>not</i> related to mental health / depression			✓	✓	✓
Symptoms and allergies <i>not</i> related to mental health / depression				✓	✓
Physical health metrics					✓
Standard labs					

eTable 2. Additional Medical History: PHQ-9 Scores

	0 (N=484)	1–4 (N=1086)	5–9 (N=518)	10–14 (N=184)	15+ (N=93)
Nonmelanoma skin cancer	12 (2.5)	42 (3.9)	18 (3.5)	3 (1.6)	0 (0.0)*
Osteoporosis	11 (2.3)	47 (4.3)	17 (3.3)	3 (1.6)	0 (0.0)*
Benign prostatic hyperplasia	22 (4.5)	44 (4.1)	17 (3.3)	3 (1.6)	0 (0.0)*
Melanoma skin cancer	11 (2.3)	23 (2.1)	5 (1.0)	0 (0.0)	0 (0.0)*
Prostate cancer	12 (2.5)	17 (1.6)	6 (1.2)	1 (0.5)	0 (0.0)*
Diabetes type 1	3 (0.6)	12 (1.1)	4 (0.8)	3 (1.6)	0 (0.0)
Macular degeneration	2 (0.4)	20 (1.8)	4 (0.8)	4 (2.2)	0 (0.0)
TIA	7 (1.4)	9 (0.8)	3 (0.6)	3 (1.6)	0 (0.0)
Hepatitis B	6 (1.2)	10 (0.9)	4 (0.8)	3 (1.6)	0 (0.0)
Coronary artery disease	11 (2.3)	44 (4.1)	13 (2.5)	6 (3.3)	1 (1.1)
Hashimoto's disease	8 (1.7)	22 (2.0)	11 (2.1)	3 (1.6)	1 (1.1)
Goiter	7 (1.4)	12 (1.1)	3 (0.6)	0 (0.0)	1 (1.1)
Hemorrhoids	11 (2.3)	44 (4.1)	18 (3.5)	4 (2.2)	1 (1.1)
Hypothyroidism	42 (8.7)	93 (8.6)	40 (7.7)	9 (4.9)	2 (2.2)
Glaucoma	14 (2.9)	29 (2.7)	10 (1.9)	6 (3.3)	2 (2.2)
Psoriasis	10 (2.1)	16 (1.5)	11 (2.1)	8 (4.3)	2 (2.2)
Peptic ulcer	5 (1.0)	22 (2.0)	13 (2.5)	4 (2.2)	2 (2.2)
Diverticulosis	8 (1.7)	29 (2.7)	10 (1.9)	5 (2.7)	2 (2.2)
Peripheral vascular disorder	1 (0.2)	15 (1.4)	8 (1.5)	2 (1.1)	2 (2.2)
Atrial fibrillation	4 (0.8)	17 (1.6)	1 (0.2)	1 (0.5)	2 (2.2)
Colon polyps	53 (11.0)	113 (10.4)	52 (10.0)	12 (6.5)	3 (3.2)
Arrhythmia	20 (4.1)	69 (6.4)	27 (5.2)	8 (4.3)	3 (3.2)
Tinnitus	31 (6.4)	52 (4.8)	35 (6.8)	6 (3.3)	3 (3.2)
Hearing Loss	29 (6.0)	75 (6.9)	26 (5.0)	12 (6.5)	3 (3.2)
Gout	14 (2.9)	29 (2.7)	14 (2.7)	5 (2.7)	3 (3.2)
Diverticulitis	3 (0.6)	20 (1.8)	17 (3.3)	3 (1.6)	3 (3.2)
Headaches	6 (1.2)	18 (1.7)	13 (2.5)	3 (1.6)	3 (3.2)
Epilepsy	5 (1.0)	19 (1.7)	12 (2.3)	5 (2.7)	3 (3.2)
Breast cancer	8 (1.7)	20 (1.8)	9 (1.7)	1 (0.5)	3 (3.2)
Myocardial infarction	6 (1.2)	19 (1.7)	11 (2.1)	1 (0.5)	3 (3.2)
Osteopenia	22 (4.5)	62 (5.7)	22 (4.2)	1 (0.5)	3 (3.2)
Stroke	5 (1.0)	12 (1.1)	9 (1.7)	1 (0.5)	3 (3.2)
Drug abuse*	5 (1.0)	14 (1.3)	5 (1.0)	13 (7.1)	4 (4.3)
Pulmonary embolism	4 (0.8)	17 (1.6)	7 (1.4)	3 (1.6)	4 (4.3)
Nonalcoholic fatty liver disease	5 (1.0)	17 (1.6)	16 (3.1)	3 (1.6)	4 (4.3)
Hepatitis C†	5 (1.0)	8 (0.7)	3 (0.6)	8 (4.3)	4 (4.3)
Cataracts	61 (12.6)	167 (15.4)	63 (12.2)	16 (8.7)	5 (5.4)
Kidney or bladder stones	36 (7.4)	66 (6.1)	18 (3.5)	13 (7.1)	5 (5.4)

Concussions	19 (3.9)	62 (5.7)	35 (6.8)	13 (7.1)	5 (5.4)
Rheumatoid arthritis†	4 (0.8)	13 (1.2)	12 (2.3)	4 (2.2)	6 (6.5)
Gallbladder disorder†	18 (3.7)	57 (5.2)	32 (6.2)	14 (7.6)	8 (8.6)
Hypercholesterolemia	68 (14.0)	127 (11.7)	70 (13.5)	19 (10.3)	9 (9.7)
Irritable bowel disorder†	9 (1.9)	60 (5.5)	34 (6.6)	7 (3.8)	10 (10.8)
Sleep apnea	38 (7.9)	101 (9.3)	63 (12.2)	19 (10.3)	11 (11.8)
Diabetes type 2†	45 (9.3)	109 (10.0)	62 (12.0)	32 (17.4)	14 (15.1)
Pneumonia	30 (6.2)	85 (7.8)	40 (7.7)	12 (6.5)	15 (16.1)
Osteoarthritis	76 (15.7)	216 (19.9)	118 (22.8)	33 (17.9)	17 (18.3)
Hypertension	122 (25.2)	297 (27.3)	144 (27.8)	51 (27.7)	26 (28.0)
Hay fever	26 (5.4)	78 (7.2)	36 (6.9)	19 (10.3)	3 (3.2)
Discharge†	19 (3.9)	64 (5.9)	44 (8.5)	18 (9.8)	8 (8.6)
Hemorrhoids†	22 (4.5)	69 (6.4)	40 (7.7)	17 (9.2)	9 (9.7)
Ear ringing†	38 (7.9)	101 (9.3)	59 (11.4)	23 (12.5)	13 (14.0)
Easy bruising or bleeding†	39 (8.1)	130 (12.0)	68 (13.1)	22 (12.0)	18 (19.4)
Runny nose†	70 (14.5)	210 (19.3)	116 (22.4)	44 (23.9)	20 (21.5)
Floater†	55 (11.4)	160 (14.7)	81 (15.6)	28 (15.2)	21 (22.6)

Data shown are no. (%), unless otherwise indicated.

P-values for trend were calculated with the use of Spearman Correlation or Cochran-Armitage tests, where appropriate.

*P-value for trend <0.0001.

†P-value for trend <0.01.

eTable 3. Estimates of the Non-Zero Coefficients from LASSO Model 1

Variable	Estimate
Age	-0.152
Age x sex	0.063

LASSO regression model 1 comprised age, sex, and age by sex interaction. Variables with zero estimates are not shown.

eTable 4. Estimates of the Non-Zero Coefficients from LASSO Model 2

Variable	Estimate
Age	-0.167
Current smoker	0.103
Not employed	0.096
Black race	-0.076
Age x sex	0.074
Former smoker	0.061
Number of pack-years smoked	0.058
Income < \$25,000	0.057
Asian race	-0.042
Uninsured	0.032
Married	-0.025
AUDIT-C score	-0.012
High school or less education	0.009
Other race	0.005
Hispanic ethnicity	0.003

LASSO regression model 2 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status and health behaviors. Variables with zero estimates are not shown.

AUDIT-C, Alcohol Use Disorders Identification Test-Concise; LASSO, least absolute shrinkage and selection operator.

eTable 5. Estimates of the Non-Zero Coefficients from LASSO Model 3

Variable	Estimate
Age	-0.194
Current smoker	0.106
Not employed	0.065
Former smoker	0.054
Uninsured	0.049
COPD with emphysema	0.048
Asthma	0.048
Sleep apnea	0.048
Fibromyalgia	0.038
Married	-0.037
GERD	0.036
Age x sex	0.035
Kidney or bladder stones	-0.032
Osteoarthritis	0.03
Asian race	-0.029
Hypertension	0.028
Epilepsy	0.027
Irritable bowel disorder	0.025
Diverticulitis	0.024
Pulmonary embolism	0.023
Migraines	0.023
Black race	-0.02
Chronic headaches	0.017
Hepatitis C	0.017
Income < \$25,000	0.016
Diabetes type 2	0.015
Cataracts	0.011
Osteoporosis	-0.011
Goiter	-0.011
Rheumatoid arthritis	0.01
Psoriasis	0.01
Nonmelanoma skin cancer	0.009
Number of pack-years smoked	0.009
Hypothyroidism	-0.009
Arrhythmia	0.008
Glaucoma	0.008
Female	0.006
Nonalcoholic fatty liver disease	0.006
Prostate cancer	-0.003

Hypercholesterolemia

0.002

LASSO regression model 3 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, and medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression). Variables with zero estimates are not shown.

COPD, chronic obstructive pulmonary disease; GERD, gastroesophageal reflux disease; LASSO, least absolute shrinkage and selection operator.

eTable 6. Estimates of the Non-Zero Coefficients from LASSO Model 4

Variable	Estimate
Age	-0.14
Tension	0.095
Body image concerns	0.085
Current smoker	0.071
Not employed	0.06
Memory change	0.059
Uninsured	0.042
Asthma	0.041
Shortness of breath	0.039
Backache	0.037
Sleep apnea	0.037
Former smoker	0.035
Lightheadedness	0.034
Kidney or bladder stones	-0.026
Married	-0.025
Neck or low back pain	0.022
Black race	-0.021
Coughing up sputum	0.019
Osteoarthritis	0.019
Headache	0.017
Food allergies	0.016
Diverticulitis	0.015
Cataracts	0.014
Constipation	0.014
Asian race	-0.014
Shortness of breath with exercise	0.012
Hypothyroidism	-0.012
Fibromyalgia	0.011
Epilepsy	0.011
GERD	0.011
Migraines	0.011
Joint pain swelling	0.009
COPD with emphysema	0.009
Heat or cold intolerance	0.009
Pulmonary embolism	0.009
Bloating	0.009
Diabetes type 2	0.007
Swelling in calves or feet	0.007
Irritable bowel disorder	0.007

Nasal stuffiness	0.007
Pneumonia	0.004
Nonmelanoma skin cancer	0.004
Hypertension	0.004
Psoriasis	0.002
Cough	0.002
Chronic headaches	0.002
Hepatitis C	0.001
Prostate cancer	-0.001

LASSO regression model 4 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression), symptoms (except those that are directly related to mental health or depression), and allergies. Variables with zero estimates are not shown. COPD, chronic obstructive pulmonary disease; GERD, gastroesophageal reflux disease; LASSO, least absolute shrinkage and selection operator.

eTable 7. Estimates of the Non-Zero Coefficients from LASSO Model 5

Variable	Estimate
Age	-0.148
Tension	0.094
Body image concerns	0.077
Current smoker	0.068
Memory change	0.062
Not employed	0.051
Waist circumference	0.049
Black race	-0.042
Asthma	0.038
6-minute walk	-0.037
Uninsured	0.036
Backache	0.035
Days watch worn 10+ hours in first 30 days	-0.032
Lightheadedness	0.031
BMI	0.031
Former smoker	0.031
Shortness of breath	0.029
Kidney or bladder stones	-0.026
Sleep apnea	0.025
Neck or low back pain	0.022
Coughing up sputum	0.021
Cataracts	0.02
Mean daily steps in first 30 days	-0.019
Constipation	0.018
Married	-0.017
Ejection fraction at rest	0.016
Food allergies	0.016
Osteoarthritis	0.015
Heart rate	0.015
Hypothyroidism	-0.015
Coronary calcium score	-0.015
Heat or cold intolerance	0.013
Headache	0.013
Irritable bowel disorder	0.013
Diverticulitis	0.012
Handgrip	-0.012
Bloating	0.011
Nonmelanoma skin cancer	0.01
Migraines	0.01

Asian race	-0.01
AUDIT-C	0.009
Joint pain swelling	0.009
Epilepsy	0.009
Pneumonia	0.008
COPD with emphysema	0.007
Pulmonary embolism	0.007
Respiratory rate	0.007
Gallbladder disease	-0.007
Nasal stuffiness	0.006
30 second chair stand	-0.005
GERD	0.004
Discharge	-0.004
Shortness of breath with exercise	0.002
Fibromyalgia	0.002
Colon polyps	0.002
Arrhythmia	0.001
Goiter	-0.001

LASSO regression model 5 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression), symptoms (except those that are directly related to mental health or depression), allergies, and physical function. Variables with zero estimates are not shown.

AUDIT-C, Alcohol Use Disorders Identification Test-Concise; BMI, body mass index; COPD, chronic obstructive pulmonary disease; GERD, gastroesophageal reflux disease; LASSO, least absolute shrinkage and selection operator.

eTable 8. LASSO Regression Results: Model 1

Variable	Estimate	P-value	CI 25%	CI 75%
Tension	0.2344	< 0.0001	0.2026	0.2661
Memory change	0.2119	< 0.0001	0.1801	0.2437
Shortness of breath	0.2033	< 0.0001	0.1714	0.2352
Backache	0.1974	< 0.0001	0.1655	0.2293
Shortness of breath with exercise	0.1914	< 0.0001	0.1594	0.2233
Neck or low back pain	0.1869	< 0.0001	0.1549	0.2189
Waist circumference	0.1814	< 0.0001	0.1480	0.2149
Mean leg balance time	-0.1796	< 0.0001	-0.2172	-0.1420
Body image concerns	0.1726	< 0.0001	0.1403	0.2049
6-minute walk	-0.1608	< 0.0001	-0.1932	-0.1284
BMI	0.1604	< 0.0001	0.1282	0.1926
Number of pack-years smoked	0.1590	< 0.0001	0.1258	0.1922
Lightheadedness	0.1576	< 0.0001	0.1254	0.1899
Current smoker	0.1561	< 0.0001	0.1238	0.1884
Heat or cold intolerance	0.1560	< 0.0001	0.1238	0.1882
Headache	0.1532	< 0.0001	0.1205	0.1859
Not employed	0.1434	< 0.0001	0.1111	0.1757
Swelling in calves or feet	0.1421	< 0.0001	0.1098	0.1745
Coughing up sputum	0.1416	< 0.0001	0.1093	0.1739
30 second chair stand	-0.1407	< 0.0001	-0.1732	-0.1081
Tingling or pins and needles	0.1403	< 0.0001	0.1079	0.1727
Tingling or numbness in extremities	0.1373	< 0.0001	0.1049	0.1697
Sit-rise score	-0.1345	< 0.0001	-0.1714	-0.0975
Muscle or joint pain	0.1343	< 0.0001	0.1019	0.1668
Constipation	0.1334	< 0.0001	0.1010	0.1657
Income < \$25,000	0.1325	< 0.0001	0.1001	0.1650
WBC count	0.1322	< 0.0001	0.0998	0.1647
Bloating	0.1305	< 0.0001	0.0979	0.1631
Cough	0.1276	< 0.0001	0.0952	0.1601
Frequency of urination	0.1274	< 0.0001	0.0945	0.1603
Nasal stuffiness	0.1259	< 0.0001	0.0934	0.1583
COPD with emphysema	0.1228	< 0.0001	0.0901	0.1555
Joint pain swelling	0.1225	< 0.0001	0.0899	0.1550
Heartburn	0.1215	< 0.0001	0.0890	0.1540
Pain or stiffness in the neck	0.1206	< 0.0001	0.0881	0.1531
Stiffness	0.1194	< 0.0001	0.0868	0.1520
Mean daily steps in first 30 days	-0.1176	< 0.0001	-0.1503	-0.0848
Heart rate	0.1165	< 0.0001	0.0835	0.1495
Urination at night	0.1158	< 0.0001	0.0823	0.1492
HbA1c	0.1144	< 0.0001	0.0813	0.1476
Diarrhea	0.1138	< 0.0001	0.0812	0.1463
10-meter walk speed	-0.1137	< 0.0001	-0.1463	-0.0810
Blood glucose	0.1136	< 0.0001	0.0808	0.1463
Oxygen saturation	-0.1118	< 0.0001	-0.1458	-0.0777
Dry mouth	0.1117	< 0.0001	0.0791	0.1444
Night sweats	0.1110	< 0.0001	0.0784	0.1435
C-reactive protein	0.1084	< 0.0001	0.0759	0.1409
Urgency	0.1080	< 0.0001	0.0751	0.1410
Monocytes	0.1075	< 0.0001	0.0742	0.1408
Neutrophils	0.1072	< 0.0001	0.0747	0.1398
Numbness or loss of sensation	0.1055	< 0.0001	0.0729	0.1380
GERD	0.1004	< 0.0001	0.0675	0.1334

Itching skin	0.0971	< 0.0001	0.0645	0.1297
Excessive belching or passing of gas	0.0957	< 0.0001	0.0631	0.1283
Respiratory rate	0.0944	< 0.0001	0.0618	0.1270
Leg cramps	0.0933	< 0.0001	0.0606	0.1260
Urine specific gravity	0.0931	< 0.0001	0.0605	0.1257
Albumin in urine	-0.0928	< 0.0001	-0.1261	-0.0595
Dryness	0.0926	< 0.0001	0.0600	0.1252
Absolute basophils	0.0925	< 0.0001	0.0598	0.1251
Uninsured	0.0924	< 0.0001	0.0597	0.1250
Cramping	0.0920	< 0.0001	0.0592	0.1248
Osteoarthritis	0.0917	< 0.0001	0.0568	0.1267
Lymphocytes (total)	0.0883	< 0.0001	0.0554	0.1213
Sleep apnea	0.0877	< 0.0001	0.0541	0.1213
ALT	0.0848	< 0.0001	0.0522	0.1175
Married	-0.0848	< 0.0001	-0.1188	-0.0508
Sinus pain	0.0838	< 0.0001	0.0511	0.1164
HDL	-0.0835	< 0.0001	-0.1161	-0.0509
Creatinine (urine)	0.0811	< 0.0001	0.0484	0.1138
Reticulocytes (% RBC)	0.0803	< 0.0001	0.0475	0.1131
Triglycerides	0.0800	< 0.0001	0.0471	0.1128
Fibromyalgia	0.0798	< 0.0001	0.0472	0.1125
Asthma	0.0796	< 0.0001	0.0469	0.1123
Former smoker	0.0791	< 0.0001	0.0454	0.1127
Absolute reticulocytes	0.0786	< 0.0001	0.0458	0.1114
Diabetes type 2	0.0780	< 0.0001	0.0448	0.1111
Urine reaction pH	-0.0762	< 0.0001	-0.1095	-0.0430
Migraines	0.0753	< 0.0001	0.0425	0.1081
Hypertension	0.0749	< 0.0001	0.0397	0.1102
Runny nose	0.0738	< 0.0001	0.0411	0.1065
Vitamin D	-0.0732	< 0.0001	-0.1067	-0.0397
Easy bruising or bleeding	0.0719	< 0.0001	0.0390	0.1049
High school or less education	0.0706	< 0.0001	0.0379	0.1033
Floaters	0.0701	< 0.0001	0.0370	0.1033
Discharge	0.0698	< 0.0001	0.0372	0.1025
Ear ringing	0.0671	< 0.0001	0.0338	0.1003
Hemorrhoids (symptom)	0.0649	0.0001	0.0320	0.0977
Days watch worn 10+ hours in first 30 days	-0.0639	0.0002	-0.0976	-0.0301
Asian race	-0.0636	0.0002	-0.0964	-0.0307
Absolute eosinophils	0.0632	0.0002	0.0304	0.0960
Seasonal allergies	0.0626	0.0002	0.0299	0.0954
Medication allergies	0.0612	0.0003	0.0283	0.0941
Irritable bowel disorder	0.0585	0.0005	0.0258	0.0912
Hepatitis C	0.0579	0.0005	0.0252	0.0907
Rheumatoid arthritis	0.0572	0.0006	0.0244	0.0900
Systolic blood pressure	0.0566	0.0017	0.0212	0.0920
Diverticulitis	0.0561	0.0008	0.0232	0.0890
Uric acid	0.0538	0.0019	0.0199	0.0876
Magnesium	-0.0537	0.0013	-0.0865	-0.0209
MCHC	-0.0533	0.0015	-0.0861	-0.0205
Handgrip	-0.0514	0.0021	-0.0842	-0.0187
Gallbladder disease	0.0488	0.0036	0.0160	0.0816
MCH	-0.0465	0.0065	-0.0799	-0.0130
AST	0.0443	0.0080	0.0116	0.0771
Epilepsy	0.0427	0.0106	0.0100	0.0755

Food allergies	0.0424	0.0112	0.0096	0.0752
Diastolic blood pressure	0.0420	0.0124	0.0091	0.0748
Pneumonia	0.0403	0.0163	0.0074	0.0732
Nonalcoholic fatty liver disease	0.0403	0.0159	0.0075	0.0731
Ejection fraction at rest	0.0403	0.0161	0.0075	0.0731
Non-seasonal allergies	0.0393	0.0189	0.0065	0.0722
Serum creatinine	0.0388	0.0239	0.0051	0.0725
Protein (serum)	-0.0381	0.0299	-0.0725	-0.0037
Cataracts	0.0368	0.0513	-0.0002	0.0737
Pulmonary embolism	0.0359	0.0321	0.0031	0.0688
Peripheral vascular disease	0.0344	0.0401	0.0016	0.0673
Hay fever	0.0342	0.0413	0.0014	0.0671
Stroke	0.0337	0.0450	0.0008	0.0667
MCV	-0.0331	0.0529	-0.0666	0.0004
Diverticulosis	0.0324	0.0541	-0.0006	0.0655
Arrhythmia	0.0324	0.0584	-0.0012	0.0659
Gout	0.0323	0.0570	-0.0010	0.0655
Myocardial infarction	0.0317	0.0606	-0.0014	0.0649
Cholesterol	-0.0305	0.0685	-0.0633	0.0023
Platelets	0.0303	0.0783	-0.0034	0.0640
LDL	-0.0301	0.0726	-0.0630	0.0028
Peptic ulcer	0.0300	0.0730	-0.0028	0.0628
Hypercholesterolemia	0.0297	0.0879	-0.0044	0.0638
Goiter	-0.0290	0.0836	-0.0618	0.0039
Coronary artery disease	0.0287	0.0959	-0.0051	0.0625
Chloride	-0.0268	0.1096	-0.0596	0.0060
Neutrophil lymphocyte ratio	0.0266	0.1156	-0.0065	0.0597
Basophils (% WBC)	0.0258	0.1242	-0.0071	0.0587
Chronic headaches	0.0258	0.1236	-0.0070	0.0586
Nonmelanoma skin cancer	0.0233	0.1738	-0.0103	0.0569
Hearing loss	0.0229	0.1869	-0.0111	0.0568
MPV	0.0224	0.1802	-0.0104	0.0552
AUDIT-C sum score	-0.0219	0.1897	-0.0547	0.0109
Benign prostatic hyperplasia	0.0218	0.2273	-0.0136	0.0571
Eosinophils (% WBC)	0.0216	0.2001	-0.0114	0.0545
Hypothyroidism	-0.0213	0.2064	-0.0544	0.0118
Macular degeneration	0.0209	0.2140	-0.0121	0.0540
Left ventricular mass index	0.0197	0.2623	-0.0147	0.0541
Hemoglobin	-0.0181	0.2868	-0.0515	0.0153
RBC count	0.0180	0.2814	-0.0148	0.0508
Psoriasis	0.0170	0.3108	-0.0158	0.0497
Lymphocytes (% WBC)	-0.0166	0.3270	-0.0499	0.0166
Kidney or bladder stones	-0.0159	0.3448	-0.0490	0.0171
Glaucoma	0.0157	0.3547	-0.0175	0.0489
Hemorrhoids	0.0152	0.3649	-0.0177	0.0482
Coronary calcium score	0.0144	0.4287	-0.0213	0.0502
Other race	0.0131	0.4445	-0.0204	0.0466
Colon polyps	0.0120	0.4975	-0.0227	0.0467
Breast cancer	0.0118	0.4826	-0.0211	0.0446
Melanoma skin cancer	-0.0117	0.4889	-0.0450	0.0215
Sodium	-0.0117	0.4856	-0.0446	0.0212
Calcium	-0.0115	0.4909	-0.0443	0.0213
Hashimotos Disease	-0.0108	0.5175	-0.0436	0.0220
Transient ischemic attack	-0.0087	0.6029	-0.0417	0.0242
Osteopenia	-0.0076	0.6521	-0.0408	0.0256
Atrial fibrillation	0.0075	0.6601	-0.0258	0.0407

Neutrophil segments (% WBC)	0.0071	0.6714	-0.0257	0.0399
Total neutrophils (% WBC)	0.0071	0.6714	-0.0257	0.0399
TSH	0.0069	0.6786	-0.0259	0.0397
Potassium	-0.0060	0.7193	-0.0390	0.0269
Hematocrit	-0.0049	0.7722	-0.0383	0.0285
Monocytes (% WBC)	0.0041	0.8177	-0.0305	0.0386
Osteoporosis	-0.0039	0.8192	-0.0369	0.0292
GFR MDRD	0.0030	0.8737	-0.0343	0.0403
Tinnitus	0.0029	0.8627	-0.0304	0.0362
Diabetes type 1	-0.0027	0.8707	-0.0356	0.0301
Hispanic ethnicity	-0.0023	0.8914	-0.0360	0.0314
Hepatitis B	-0.0022	0.8963	-0.0351	0.0307
Prostate cancer	-0.0009	0.9575	-0.0348	0.0329
Black race	0.0004	0.9790	-0.0325	0.0334

LASSO regression model 1 comprised age, sex, and age by sex interaction. The LASSO-predicted value was used to estimate a covariate-adjusted effect for all other candidate variables shown.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; AUDIT-C, Alcohol Use Disorders Identification Test-Concise; BMI, body mass index; COPD, chronic obstructive pulmonary disease; GFR, glomerular filtration rate; GERD, gastroesophageal reflux disease; HbA1c, hemoglobin A1c; HDL, high density lipoprotein; LASSO, least absolute shrinkage and selection operator; LDL, low density lipoprotein; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; MDRD, modification of diet in renal disease; RBC, red blood cells; TSH, thyroid-stimulating hormone; WBC, white blood cells.

eTable 9. LASSO Regression Results: Model 2

Variable	Estimate	P-value	CI 25%	CI 75%
Tension	0.1970	< 0.0001	0.1659	0.2282
Memory change	0.1732	< 0.0001	0.1423	0.2040
Backache	0.1585	< 0.0001	0.1273	0.1898
Body image concerns	0.1527	< 0.0001	0.1216	0.1837
Neck or low back pain	0.1419	< 0.0001	0.1105	0.1733
Shortness of breath with exercise	0.1336	< 0.0001	0.1019	0.1652
Shortness of breath	0.1329	< 0.0001	0.1011	0.1646
BMI	0.1269	< 0.0001	0.0958	0.1581
Lightheadedness	0.1268	< 0.0001	0.0955	0.1581
Waist circumference	0.1235	< 0.0001	0.0925	0.1545
Headache	0.1188	< 0.0001	0.0871	0.1505
Heat or cold intolerance	0.1159	< 0.0001	0.0845	0.1472
6-minute walk	-0.1139	< 0.0001	-0.1451	-0.0827
Constipation	0.1078	< 0.0001	0.0766	0.1391
Muscle or joint pain	0.1044	< 0.0001	0.0732	0.1356
Swelling in calves or feet	0.1036	< 0.0001	0.0723	0.1349
Bloating	0.1036	< 0.0001	0.0721	0.1351
Nasal stuffiness	0.1014	< 0.0001	0.0702	0.1326
Coughing up sputum	0.0978	< 0.0001	0.0663	0.1293
Joint pain swelling	0.0971	< 0.0001	0.0659	0.1282
Pain or stiffness in the neck	0.0937	< 0.0001	0.0623	0.1250
Frequency of urination	0.0927	< 0.0001	0.0615	0.1238
Heartburn	0.0913	< 0.0001	0.0599	0.1227
Diarrhea	0.0903	< 0.0001	0.0589	0.1216
Tingling or numbness in extremities	0.0900	< 0.0001	0.0586	0.1214
30 second chair stand	-0.0893	< 0.0001	-0.1207	-0.0580
Tingling or pins and needles	0.0859	< 0.0001	0.0543	0.1176
Cough	0.0855	< 0.0001	0.0539	0.1170
C-reactive protein	0.0847	< 0.0001	0.0534	0.1161
Blood glucose	0.0819	< 0.0001	0.0506	0.1131
Night sweats	0.0811	< 0.0001	0.0497	0.1125
Stiffness	0.0806	< 0.0001	0.0492	0.1119
Mean leg balance time	-0.0777	< 0.0001	-0.1090	-0.0464
HbA1c	0.0772	< 0.0001	0.0460	0.1084
Heart rate	0.0771	< 0.0001	0.0450	0.1092
Urination at night	0.0770	< 0.0001	0.0458	0.1082
ALT	0.0751	< 0.0001	0.0439	0.1063
Mean daily steps in first 30 days	-0.0745	< 0.0001	-0.1058	-0.0432
Urgency	0.0743	< 0.0001	0.0430	0.1055
Excessive belching or passing of gas	0.0739	< 0.0001	0.0426	0.1052
GERD	0.0727	< 0.0001	0.0414	0.1039
10-meter walk speed	-0.0721	< 0.0001	-0.1035	-0.0407
Dry mouth	0.0718	< 0.0001	0.0404	0.1032
Asthma	0.0715	< 0.0001	0.0403	0.1028
Sleep apnea	0.0711	< 0.0001	0.0397	0.1024
Itching skin	0.0682	< 0.0001	0.0368	0.0997
Sit-rise score	-0.0663	< 0.0001	-0.0978	-0.0348
WBC count	0.0653	< 0.0001	0.0327	0.0979
MCH	-0.0653	< 0.0001	-0.0965	-0.0340
Sinus pain	0.0652	< 0.0001	0.0338	0.0966
Urine specific gravity	0.0651	< 0.0001	0.0338	0.0965

Respiratory rate	0.0646	< 0.0001	0.0332	0.0960
Absolute reticulocytes	0.0634	< 0.0001	0.0319	0.0948
Leg cramps	0.0632	< 0.0001	0.0319	0.0945
Dryness	0.0622	0.0001	0.0307	0.0937
Numbness or loss of sensation	0.0615	0.0001	0.0299	0.0930
Creatinine (urine)	0.0611	0.0001	0.0297	0.0925
Cramping	0.0602	0.0002	0.0284	0.0920
Reticulocytes (% RBC)	0.0601	0.0002	0.0286	0.0916
Oxygen saturation	-0.0597	0.0002	-0.0910	-0.0284
Albumin in urine	-0.0581	0.0003	-0.0894	-0.0268
Migraines	0.0581	0.0003	0.0266	0.0896
MCV	-0.0578	0.0003	-0.0891	-0.0266
Osteoarthritis	0.0561	0.0005	0.0247	0.0876
Seasonal allergies	0.0556	0.0005	0.0243	0.0868
HDL	-0.0534	0.0009	-0.0848	-0.0220
Hemorrhoids (symptom)	0.0528	0.0009	0.0215	0.0841
Fibromyalgia	0.0525	0.0011	0.0211	0.0840
Lymphocytes (total)	0.0518	0.0015	0.0198	0.0838
Runny nose	0.0515	0.0013	0.0201	0.0828
Irritable bowel disorder	0.0513	0.0013	0.0200	0.0826
Ear ringing	0.0498	0.0019	0.0184	0.0811
Vitamin D	-0.0497	0.0023	-0.0816	-0.0178
Days watch worn 10+ hours in first 30 days	-0.0495	0.0023	-0.0813	-0.0177
COPD with emphysema	0.0488	0.0027	0.0170	0.0807
Food allergies	0.0483	0.0025	0.0170	0.0796
MCHC	-0.0483	0.0025	-0.0797	-0.0170
Hypertension	0.0479	0.0030	0.0162	0.0795
Urine reaction pH	-0.0473	0.0031	-0.0787	-0.0160
Triglycerides	0.0470	0.0033	0.0156	0.0783
Monocytes	0.0465	0.0037	0.0151	0.0779
Neutrophils	0.0462	0.0049	0.0140	0.0785
Serum creatinine	0.0460	0.0044	0.0143	0.0777
Uric acid	0.0460	0.0043	0.0144	0.0775
Diabetes type 2	0.0456	0.0044	0.0143	0.0769
AST	0.0447	0.0052	0.0134	0.0760
Discharge	0.0446	0.0054	0.0132	0.0760
Non-seasonal allergies	0.0445	0.0053	0.0132	0.0759
Diverticulitis	0.0432	0.0069	0.0119	0.0745
Floaters	0.0421	0.0084	0.0108	0.0734
Absolute basophils	0.0417	0.0098	0.0101	0.0734
Ejection fraction at rest	0.0415	0.0094	0.0102	0.0729
Easy bruising or bleeding	0.0354	0.0272	0.0040	0.0667
Medication allergies	0.0345	0.0311	0.0031	0.0658
Epilepsy	0.0318	0.0471	0.0004	0.0631
Systolic blood pressure	0.0316	0.0505	-0.0001	0.0632
Chloride	-0.0308	0.0544	-0.0621	0.0006
Nonalcoholic fatty liver disease	0.0303	0.0578	-0.0010	0.0617
Arrhythmia	0.0299	0.0629	-0.0016	0.0614
RBC count	0.0296	0.0641	-0.0017	0.0610
Kidney or bladder stones	-0.0288	0.0721	-0.0601	0.0026
Chronic headaches	0.0285	0.0746	-0.0028	0.0599
Rheumatoid arthritis	0.0280	0.0808	-0.0034	0.0594
Hay fever	0.0279	0.0815	-0.0035	0.0592
Benign prostatic hyperplasia	0.0274	0.0946	-0.0047	0.0596
Cholesterol	-0.0267	0.0947	-0.0581	0.0046

Absolute eosinophils	0.0265	0.0983	-0.0049	0.0580
Diverticulosis	0.0262	0.1013	-0.0051	0.0576
Goiter	-0.0261	0.1034	-0.0574	0.0053
Magnesium	-0.0258	0.1099	-0.0574	0.0058
Gout	0.0255	0.1116	-0.0059	0.0569
LDL	-0.0246	0.1238	-0.0560	0.0067
Hepatitis C	0.0239	0.1373	-0.0076	0.0554
Diastolic blood pressure	0.0232	0.1467	-0.0081	0.0546
Peripheral vascular disease	0.0230	0.1508	-0.0084	0.0543
Hypercholesterolemia	0.0227	0.1598	-0.0089	0.0543
Hemoglobin	-0.0225	0.1601	-0.0540	0.0089
Nonmelanoma skin cancer	0.0212	0.1869	-0.0103	0.0528
MPV	0.0211	0.1861	-0.0102	0.0525
Hearing loss	0.0210	0.1924	-0.0106	0.0527
Hypothyroidism	-0.0209	0.1930	-0.0523	0.0106
Handgrip	-0.0205	0.2025	-0.0522	0.0111
Pulmonary embolism	0.0194	0.2246	-0.0119	0.0508
Cataracts	0.0186	0.2549	-0.0134	0.0507
Glaucoma	0.0186	0.2477	-0.0129	0.0501
Sodium	-0.0167	0.2976	-0.0480	0.0147
Pneumonia	0.0166	0.3007	-0.0148	0.0479
Potassium	-0.0153	0.3403	-0.0466	0.0161
Macular degeneration	0.0140	0.3806	-0.0173	0.0454
Protein (serum)	-0.0139	0.3870	-0.0454	0.0176
Stroke	0.0133	0.4058	-0.0181	0.0447
Hemorrhoids	0.0132	0.4094	-0.0182	0.0446
Coronary artery disease	0.0123	0.4424	-0.0191	0.0438
Basophils (% WBC)	0.0118	0.4593	-0.0195	0.0432
Hematocrit	-0.0117	0.4667	-0.0431	0.0198
Psoriasis	0.0109	0.4946	-0.0204	0.0423
Myocardial infarction	0.0104	0.5153	-0.0210	0.0418
Eosinophils (% WBC)	0.0104	0.5158	-0.0210	0.0418
Peptic ulcer	0.0102	0.5244	-0.0212	0.0416
Breast cancer	0.0101	0.5287	-0.0213	0.0414
Neutrophil lymphocyte ratio	0.0100	0.5337	-0.0214	0.0413
Melanoma skin cancer	-0.0099	0.5384	-0.0414	0.0216
Calcium	-0.0098	0.5396	-0.0412	0.0215
Transient ischemic attack	-0.0090	0.5746	-0.0404	0.0224
Coronary calcium score	-0.0085	0.6007	-0.0401	0.0232
Left ventricular mass index	0.0082	0.6113	-0.0234	0.0398
Gallbladder disease	0.0081	0.6131	-0.0234	0.0397
TSH	0.0081	0.6117	-0.0232	0.0395
Tinnitus	0.0081	0.6138	-0.0234	0.0397
Osteoporosis	-0.0081	0.6139	-0.0395	0.0233
GFR MDRD	0.0075	0.6465	-0.0247	0.0398
Colon polyps	0.0074	0.6490	-0.0244	0.0391
Hashimotos Disease	-0.0073	0.6467	-0.0387	0.0240
Neutrophil segments (% WBC)	-0.0072	0.6530	-0.0386	0.0242
Total neutrophils (% WBC)	-0.0072	0.6530	-0.0386	0.0242
Platelets	0.0059	0.7162	-0.0261	0.0380
Atrial fibrillation	0.0056	0.7273	-0.0259	0.0371
Osteopenia	-0.0046	0.7748	-0.0361	0.0269
Diabetes type 1	0.0039	0.8093	-0.0275	0.0352
Lymphocytes (% WBC)	0.0038	0.8133	-0.0276	0.0351
Hepatitis B	0.0030	0.8507	-0.0284	0.0344
Monocytes (% WBC)	0.0030	0.8543	-0.0288	0.0348

<u>Prostate cancer</u>	<u>0.0030</u>	<u>0.8543</u>	<u>-0.0287</u>	<u>0.0347</u>
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LASSO regression model 2 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status and health behaviors. The LASSO-predicted value was used to estimate a covariate-adjusted effect for all other candidate variables shown.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; BMI, body mass index; COPD, chronic obstructive pulmonary disease; GFR, glomerular filtration rate; GERD, gastroesophageal reflux disease; HbA1c, hemoglobin A1c; HDL, high density lipoprotein; LASSO, least absolute shrinkage and selection operator; LDL, low density lipoprotein; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; MDRD, modification of diet in renal disease; RBC, red blood cells; TSH, thyroid-stimulating hormone; WBC, white blood cells.

eTable 10. LASSO Regression Results: Model 3

Variable	Estimate	P-value	CI 25%	CI 75%
Tension	0.1847	< 0.0001	0.1543	0.2152
Memory change	0.1511	< 0.0001	0.1207	0.1816
Body image concerns	0.1457	< 0.0001	0.1154	0.1760
Backache	0.1336	< 0.0001	0.1026	0.1645
Neck or low back pain	0.1191	< 0.0001	0.0881	0.1501
Lightheadedness	0.1047	< 0.0001	0.0739	0.1355
Shortness of breath with exercise	0.1028	< 0.0001	0.0713	0.1343
Shortness of breath	0.0976	< 0.0001	0.0657	0.1294
Headache	0.0967	< 0.0001	0.0655	0.1280
Constipation	0.0932	< 0.0001	0.0627	0.1238
Heat or cold intolerance	0.0918	< 0.0001	0.0609	0.1227
Nasal stuffiness	0.0880	< 0.0001	0.0574	0.1185
Waist circumference	0.0834	< 0.0001	0.0528	0.1141
BMI	0.0829	< 0.0001	0.0517	0.1142
Swelling in calves or feet	0.0816	< 0.0001	0.0508	0.1124
6-minute walk	-0.0801	< 0.0001	-0.1111	-0.0491
Bloating	0.0795	< 0.0001	0.0484	0.1106
Muscle or joint pain	0.0791	< 0.0001	0.0484	0.1098
Frequency of urination	0.0786	< 0.0001	0.0482	0.1091
Coughing up sputum	0.0781	< 0.0001	0.0471	0.1090
30 second chair stand	-0.0762	< 0.0001	-0.1068	-0.0455
Pain or stiffness in the neck	0.0745	< 0.0001	0.0438	0.1053
Joint pain swelling	0.0735	< 0.0001	0.0428	0.1041
Tingling or numbness in extremities	0.0729	< 0.0001	0.0420	0.1037
Heartburn	0.0712	< 0.0001	0.0404	0.1021
Night sweats	0.0681	< 0.0001	0.0373	0.0988
Urination at night	0.0642	< 0.0001	0.0337	0.0946
Cough	0.0631	< 0.0001	0.0320	0.0941
Mean daily steps in first 30 days	-0.0620	< 0.0001	-0.0926	-0.0313
Tingling or pins and needles	0.0616	0.0001	0.0304	0.0928
Diarrhea	0.0609	0.0001	0.0298	0.0919
C-reactive protein	0.0604	0.0001	0.0296	0.0913
Urgency	0.0601	0.0001	0.0295	0.0906
Blood glucose	0.0594	0.0001	0.0288	0.0901
Stiffness	0.0591	0.0002	0.0284	0.0899
Leg cramps	0.0588	0.0002	0.0282	0.0893
Mean leg balance time	-0.0565	0.0003	-0.0870	-0.0260
ALT	0.0560	0.0003	0.0254	0.0865
Dryness	0.0556	0.0004	0.0250	0.0863
Heart rate	0.0550	0.0006	0.0234	0.0866
Itching skin	0.0548	0.0005	0.0240	0.0856
Excessive belching or passing of gas	0.0547	0.0005	0.0240	0.0854
Sit-rise score	-0.0526	0.0008	-0.0831	-0.0220
Sinus pain	0.0525	0.0008	0.0219	0.0832
10-meter walk speed	-0.0525	0.0008	-0.0833	-0.0217
Oxygen saturation	-0.0506	0.0012	-0.0811	-0.0201
HbA1c	0.0499	0.0014	0.0193	0.0805
Respiratory rate	0.0495	0.0016	0.0187	0.0802
Ejection fraction at rest	0.0465	0.0028	0.0160	0.0771
WBC count	0.0462	0.0045	0.0144	0.0781

Absolute reticulocytes	0.0462	0.0033	0.0154	0.0770
Reticulocytes (% RBC)	0.0461	0.0034	0.0153	0.0770
Dry mouth	0.0456	0.0038	0.0148	0.0765
Albumin in urine	-0.0456	0.0034	-0.0761	-0.0151
Numbness or loss of sensation	0.0441	0.0052	0.0132	0.0751
Ear ringing	0.0422	0.0068	0.0116	0.0727
Food allergies	0.0418	0.0072	0.0113	0.0724
MCH	-0.0413	0.0084	-0.0720	-0.0106
Runny nose	0.0389	0.0128	0.0083	0.0695
Cramping	0.0389	0.0147	0.0076	0.0701
Hemorrhoids (symptom)	0.0386	0.0134	0.0080	0.0691
Days watch worn 10+ hours in first 30 days	-0.0385	0.0149	-0.0696	-0.0075
Handgrip	-0.0379	0.0150	-0.0685	-0.0074
MCHC	-0.0378	0.0156	-0.0684	-0.0072
Urine specific gravity	0.0361	0.0222	0.0052	0.0669
Absolute basophils	0.0352	0.0255	0.0043	0.0660
Urine reaction pH	-0.0351	0.0243	-0.0657	-0.0046
Monocytes	0.0350	0.0253	0.0043	0.0657
Lymphocytes (total)	0.0350	0.0283	0.0037	0.0663
Triglycerides	0.0347	0.0262	0.0041	0.0654
Discharge	0.0345	0.0273	0.0039	0.0652
MCV	-0.0338	0.0306	-0.0645	-0.0032
Neutrophils	0.0331	0.0390	0.0017	0.0645
Floater	0.0330	0.0342	0.0025	0.0636
Creatinine (urine)	0.0325	0.0397	0.0015	0.0635
AST	0.0319	0.0404	0.0014	0.0625
Serum creatinine	0.0311	0.0465	0.0005	0.0618
Seasonal allergies	0.0288	0.0650	-0.0018	0.0595
Easy bruising or bleeding	0.0272	0.0821	-0.0035	0.0578
Vitamin D	-0.0269	0.0928	-0.0583	0.0045
Medication allergies	0.0258	0.0977	-0.0047	0.0564
Uric acid	0.0247	0.1137	-0.0059	0.0552
Non-seasonal allergies	0.0237	0.1300	-0.0070	0.0543
HDL	-0.0229	0.1470	-0.0540	0.0081
Hemoglobin	-0.0229	0.1427	-0.0535	0.0077
Chloride	-0.0219	0.1590	-0.0525	0.0086
Protein (serum)	-0.0213	0.1737	-0.0520	0.0094
Systolic blood pressure	0.0186	0.2348	-0.0121	0.0492
Hay fever	0.0173	0.2677	-0.0133	0.0478
MPV	0.0154	0.3227	-0.0152	0.0460
Absolute eosinophils	0.0147	0.3473	-0.0160	0.0455
Hematocrit	-0.0147	0.3474	-0.0453	0.0159
Basophils (% WBC)	0.0140	0.3691	-0.0166	0.0446
Coronary calcium score	-0.0118	0.4500	-0.0426	0.0189
RBC count	0.0109	0.4830	-0.0196	0.0415
LDL	-0.0105	0.5007	-0.0411	0.0201
GFR MDRD	-0.0087	0.5884	-0.0402	0.0228
Diastolic blood pressure	0.0087	0.5775	-0.0219	0.0393
Neutrophil lymphocyte ratio	0.0079	0.6135	-0.0227	0.0384
Sodium	-0.0077	0.6218	-0.0383	0.0229
Calcium	-0.0056	0.7179	-0.0362	0.0249
Cholesterol	-0.0054	0.7296	-0.0360	0.0252
Monocytes (% WBC)	0.0038	0.8106	-0.0271	0.0346
Neutrophil segments (% WBC)	-0.0035	0.8244	-0.0340	0.0271
Total neutrophils (% WBC)	-0.0035	0.8244	-0.0340	0.0271

Platelets	0.0031	0.8456	-0.0280	0.0342
Left ventricular mass index	-0.0026	0.8673	-0.0333	0.0280
TSH	0.0025	0.8751	-0.0281	0.0330
Eosinophils (% WBC)	0.0023	0.8824	-0.0283	0.0329
Lymphocytes (% WBC)	0.0014	0.9280	-0.0292	0.0320
Potassium	-0.0008	0.9588	-0.0314	0.0298
Magnesium	-0.0005	0.9745	-0.0316	0.0306

LASSO regression model 3 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, and medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression). The LASSO-predicted value was used to estimate a covariate-adjusted effect for all other candidate variables shown.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; BMI, body mass index; GFR, glomerular filtration rate; GERD, gastroesophageal reflux disease; HbA1c, hemoglobin A1c; HDL, high density lipoprotein; LASSO, least absolute shrinkage and selection operator; LDL, low density lipoprotein; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; MDRD, modification of diet in renal disease; RBC, red blood cells; TSH, thyroid-stimulating hormone; WBC, white blood cells.

eTable 11. LASSO Regression Results: Model 4

Variable	Estimate	P-value	CI 25%	CI 75%
BMI	0.0664	< 0.0001	0.0369	0.0960
6-minute walk	-0.0661	< 0.0001	-0.0955	-0.0368
Waist circumference	0.0618	< 0.0001	0.0326	0.0910
Mean daily steps in first 30 days	-0.0522	0.0004	-0.0813	-0.0232
ALT	0.0520	0.0004	0.0230	0.0809
Heart rate	0.0491	0.0012	0.0195	0.0787
30 second chair stand	-0.0458	0.0023	-0.0752	-0.0164
Blood glucose	0.0454	0.0022	0.0164	0.0745
WBC count	0.0454	0.0028	0.0157	0.0751
C-reactive protein	0.0431	0.0040	0.0137	0.0724
Absolute reticulocytes	0.0413	0.0054	0.0122	0.0705
Sit-rise score	-0.0408	0.0058	-0.0697	-0.0118
Reticulocytes (% RBC)	0.0401	0.0071	0.0109	0.0692
Handgrip	-0.0399	0.0070	-0.0688	-0.0109
Mean leg balance time	-0.0390	0.0083	-0.0679	-0.0100
Oxygen saturation	-0.0385	0.0091	-0.0675	-0.0096
AST	0.0374	0.0112	0.0085	0.0663
Respiratory rate	0.0367	0.0138	0.0075	0.0659
10-meter walk speed	-0.0362	0.0154	-0.0654	-0.0069
Albumin in urine	-0.0361	0.0146	-0.0651	-0.0071
Days watch worn 10+ hours in first 30 days	-0.0360	0.0157	-0.0653	-0.0068
Lymphocytes (total)	0.0354	0.0181	0.0060	0.0648
HbA1c	0.0352	0.0177	0.0061	0.0643
Ejection fraction at rest	0.0351	0.0173	0.0062	0.0641
Neutrophils	0.0350	0.0200	0.0055	0.0644
MCHC	-0.0341	0.0212	-0.0631	-0.0051
MCH	-0.0301	0.0428	-0.0592	-0.0010
Monocytes	0.0282	0.0577	-0.0009	0.0572
Absolute basophils	0.0270	0.0702	-0.0022	0.0562
Triglycerides	0.0267	0.0716	-0.0023	0.0557
Urine reaction pH	-0.0265	0.0734	-0.0554	0.0025
MCV	-0.0223	0.1333	-0.0513	0.0068
Sodium	-0.0220	0.1359	-0.0510	0.0069
Chloride	-0.0211	0.1537	-0.0500	0.0079
Serum creatinine	0.0203	0.1701	-0.0087	0.0492
MPV	0.0189	0.2015	-0.0101	0.0478
Potassium	-0.0185	0.2097	-0.0475	0.0104
Urine specific gravity	0.0179	0.2308	-0.0114	0.0473
Vitamin D	-0.0166	0.2713	-0.0462	0.0130
Systolic blood pressure	0.0165	0.2654	-0.0125	0.0455
LDL	-0.0158	0.2837	-0.0448	0.0131
Protein (serum)	-0.0145	0.3256	-0.0435	0.0145
RBC count	0.0144	0.3285	-0.0145	0.0434
Creatinine (urine)	0.0140	0.3518	-0.0154	0.0434
Basophils (% WBC)	0.0119	0.4208	-0.0171	0.0408
Left ventricular mass index	-0.0114	0.4391	-0.0404	0.0175
Uric acid	0.0111	0.4506	-0.0178	0.0401
Coronary calcium score	-0.0108	0.4681	-0.0398	0.0183
TSH	0.0102	0.4912	-0.0188	0.0391
Hemoglobin	-0.0095	0.5236	-0.0385	0.0196
Magnesium	-0.0074	0.6195	-0.0366	0.0218

Diastolic blood pressure	0.0064	0.6651	-0.0226	0.0354
Eosinophils (% WBC)	-0.0057	0.7011	-0.0346	0.0233
GFR MDRD	-0.0054	0.7173	-0.0349	0.0241
Neutrophil lymphocyte ratio	0.0053	0.7185	-0.0236	0.0343
Calcium	-0.0049	0.7398	-0.0339	0.0240
Platelets	0.0039	0.7947	-0.0254	0.0331
Cholesterol	-0.0034	0.8172	-0.0324	0.0256
HDL	-0.0027	0.8565	-0.0322	0.0267
Monocytes (% WBC)	0.0025	0.8652	-0.0266	0.0317
Absolute eosinophils	0.0017	0.9082	-0.0274	0.0309
Lymphocytes (% WBC)	0.0015	0.9192	-0.0275	0.0305
Neutrophil segments (% WBC)	-0.0013	0.9307	-0.0302	0.0277
Total neutrophils (% WBC)	-0.0013	0.9307	-0.0302	0.0277
Hematocrit	-0.0011	0.9413	-0.0301	0.0279

LASSO regression model 4 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression), symptoms (except those that are directly related to mental health or depression), and allergies. The LASSO-predicted value was used to estimate a covariate-adjusted effect for all other candidate variables shown.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; BMI, body mass index; GFR, glomerular filtration rate; GERD, gastroesophageal reflux disease; HbA1c, hemoglobin A1c; HDL, high density lipoprotein; LASSO, least absolute shrinkage and selection operator; LDL, low density lipoprotein; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; MDRD, modification of diet in renal disease; RBC, red blood cells; TSH, thyroid-stimulating hormone; WBC, white blood cells.

eTable 12. LASSO Regression Results: Model 5

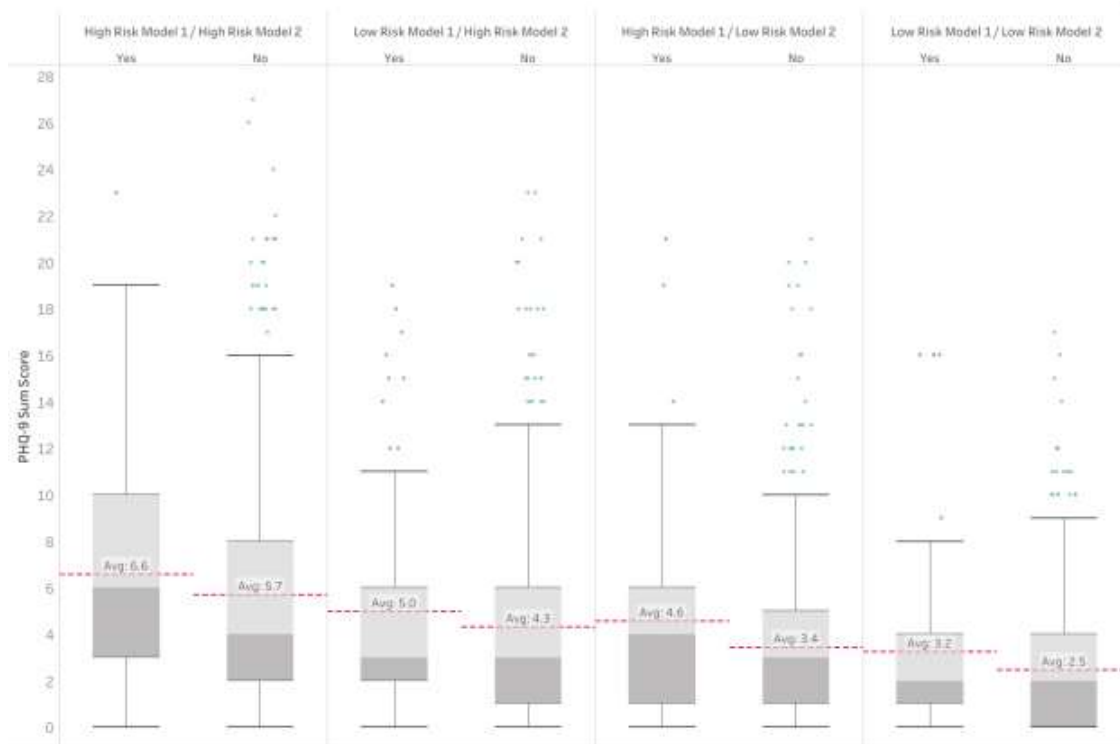
Variable	Estimate	P-value	CI 25%	CI 75%
AST	0.0382	0.0087	0.0096	0.0667
ALT	0.0352	0.0162	0.0065	0.0638
HDL	0.0312	0.0383	0.0017	0.0607
Serum creatinine	0.0220	0.1313	-0.0066	0.0506
LDL	-0.0212	0.1460	-0.0497	0.0074
Blood glucose	0.0207	0.1606	-0.0082	0.0497
MCHC	-0.0199	0.1747	-0.0486	0.0088
Basophils (% WBC)	0.0183	0.2085	-0.0102	0.0469
Chloride	-0.0183	0.2099	-0.0468	0.0103
MPV	0.0181	0.2145	-0.0105	0.0467
Sodium	-0.0179	0.2203	-0.0464	0.0107
Absolute basophils	0.0170	0.2479	-0.0119	0.0460
Protein (serum)	-0.0169	0.2471	-0.0455	0.0117
MCH	-0.0148	0.3137	-0.0437	0.0140
Potassium	-0.0143	0.3259	-0.0429	0.0143
GFR MDRD	-0.0138	0.3535	-0.0430	0.0154
Lymphocytes (total)	0.0133	0.3748	-0.0160	0.0425
Platelets	-0.0127	0.3923	-0.0417	0.0164
WBC count	0.0125	0.4143	-0.0175	0.0424
Monocytes	0.0121	0.4122	-0.0168	0.0409
C-reactive protein	0.0104	0.4880	-0.0190	0.0398
Monocytes (% WBC)	0.0103	0.4818	-0.0185	0.0391
HbA1c	0.0101	0.4930	-0.0188	0.0391
MCV	-0.0101	0.4933	-0.0388	0.0187
TSH	0.0100	0.4930	-0.0186	0.0386
Albumin in urine	-0.0096	0.5130	-0.0383	0.0192
Magnesium	0.0095	0.5205	-0.0195	0.0385
Uric acid	-0.0080	0.5827	-0.0366	0.0206
RBC count	0.0073	0.6161	-0.0213	0.0359
Urine reaction pH	-0.0073	0.6185	-0.0360	0.0214
Neutrophil segments (% WBC)	-0.0072	0.6205	-0.0358	0.0214
Total neutrophils (% WBC)	-0.0072	0.6205	-0.0358	0.0214
Absolute reticulocytes	0.0069	0.6408	-0.0222	0.0361
Neutrophils	0.0068	0.6483	-0.0226	0.0363
Absolute eosinophils	-0.0064	0.6635	-0.0352	0.0224
Calcium	0.0062	0.6691	-0.0224	0.0348
Vitamin D	0.0057	0.7024	-0.0237	0.0352
Lymphocytes (% WBC)	0.0057	0.6944	-0.0229	0.0343
Reticulocytes (% RBC)	0.0057	0.7017	-0.0235	0.0349
Triglycerides	0.0055	0.7075	-0.0233	0.0343
Eosinophils (% WBC)	-0.0047	0.7449	-0.0333	0.0238
Hemoglobin	-0.0047	0.7481	-0.0334	0.0240
Cholesterol	-0.0033	0.8231	-0.0319	0.0254
Urine specific gravity	-0.0029	0.8465	-0.0321	0.0263
Neutrophil lymphocyte ratio	-0.0009	0.9488	-0.0295	0.0276
Creatinine (urine)	0.0006	0.9663	-0.0285	0.0298
Hematocrit	0.0000	0.9974	-0.0286	0.0287

LASSO regression model 5 comprised age, sex, age by sex interaction, race, ethnicity, socioeconomic status, health behaviors, medical conditions (except mental health disorder diagnoses or disorders directly related to mental health or depression), symptoms (except those that are directly related to mental health or depression), allergies, and physical function. The LASSO-predicted value was used to estimate a covariate-adjusted effect for all other candidate variables shown.

ALT, alanine aminotransferase; AST, aspartate aminotransferase; GFR, glomerular filtration rate; GERD, gastroesophageal reflux disease; HbA1c, hemoglobin A1c; HDL, high density lipoprotein; LASSO, least absolute shrinkage and selection operator; LDL, low density lipoprotein; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; MDRD, modification of diet in renal disease; RBC, red blood cells; TSH, thyroid-stimulating hormone; WBC, white blood cells.

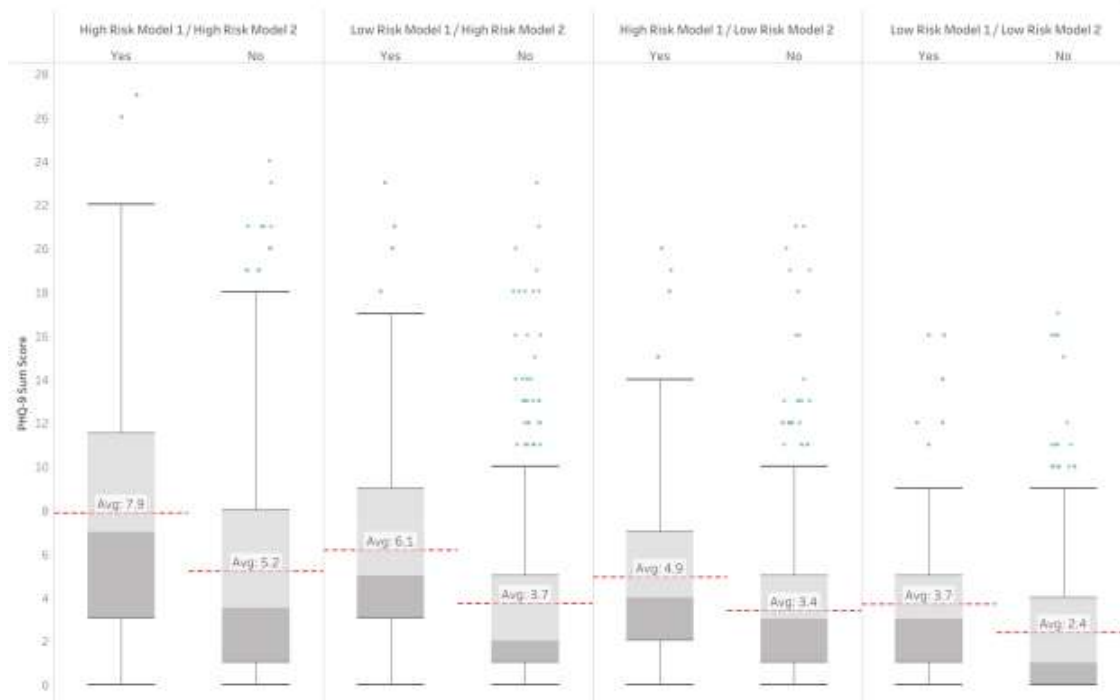
eFigure 1. Distribution of PHQ-9 Score Across Risk Groups by Asthma

Risk groups were created based on the LASSO-predicted value using LASSO Model 1 (age, sex, age x sex interaction) and Model 2 (race, ethnicity, socioeconomic-related variables and health behaviors). "High risk" was defined as the top 50% of the predicted value, while "low risk" was defined as the bottom 50% of the predicted value. LASSO, least absolute shrinkage and selection operator; PHQ-9, Patient Health Questionnaire-9.

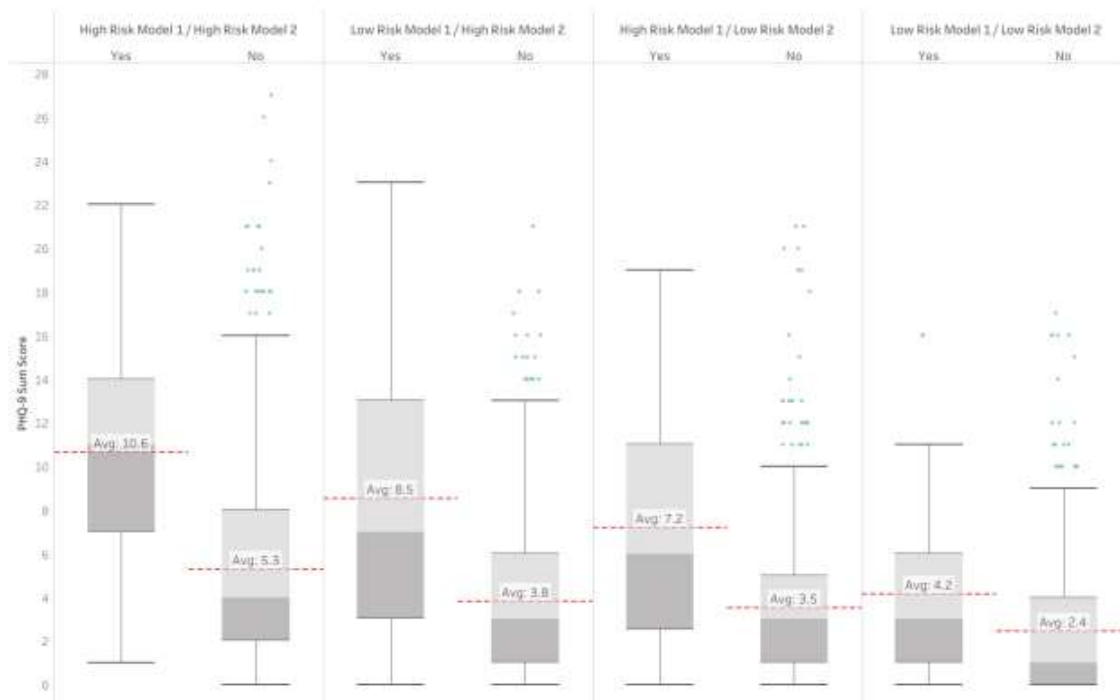


eFigure 2. Distribution of PHQ-9 Score Across Risk Groups by Backache

Risk groups were created based on the LASSO-predicted value using LASSO Model 1 (age, sex, age x sex interaction) and Model 2 (race, ethnicity, socioeconomic-related variables and health behaviors). “High risk” was defined as the top 50% of the predicted value, while “low risk” was defined as the bottom 50% of the predicted value. LASSO, least absolute shrinkage and selection operator; PHQ-9, Patient Health Questionnaire-9.

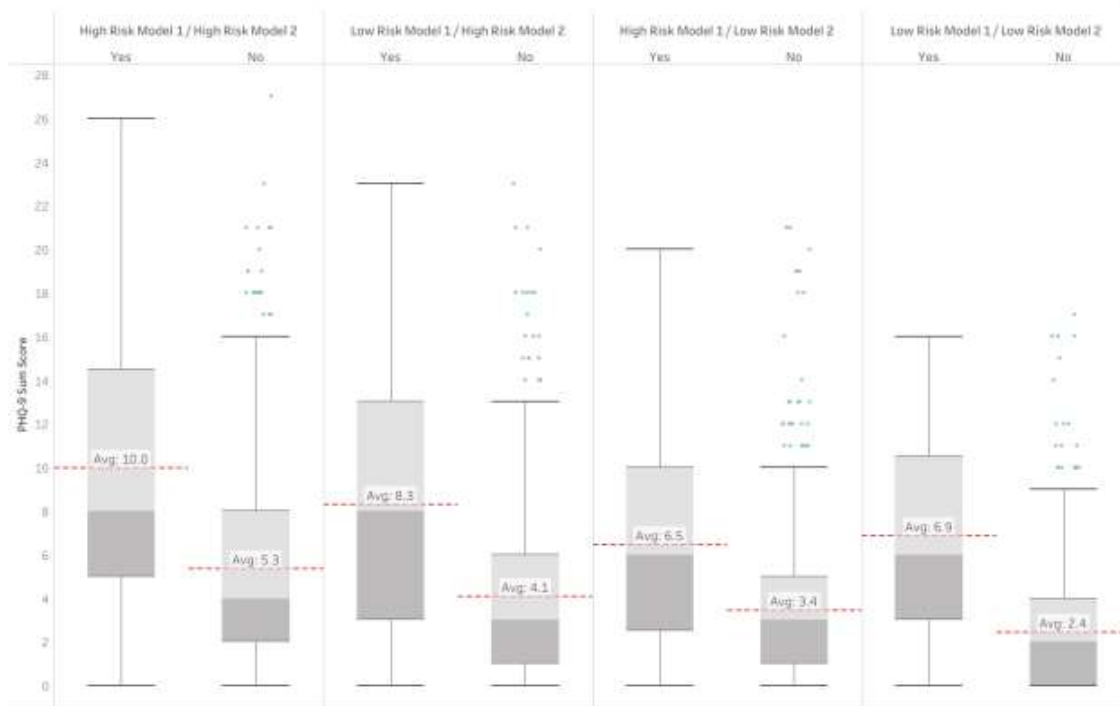


eFigure 3. Distribution of PHQ-9 Score Across Risk Groups by Memory Change
Risk groups were created based on the LASSO-predicted value using LASSO Model 1 (age, sex, age x sex interaction) and Model 2 (race, ethnicity, socioeconomic-related variables and health behaviors). “High risk” was defined as the top 50% of the predicted value, while “low risk” was defined as the bottom 50% of the predicted value. LASSO, least absolute shrinkage and selection operator; PHQ-9, Patient Health Questionnaire-9.



eFigure 4. Distribution of PHQ-9 Score Across Risk Groups by Body Image Concerns

Risk groups were created based on the LASSO-predicted value using LASSO Model 1 (age, sex, age x sex interaction) and Model 2 (race, ethnicity, socioeconomic-related variables and health behaviors). “High risk” was defined as the top 50% of the predicted value, while “low risk” was defined as the bottom 50% of the predicted value. LASSO, least absolute shrinkage and selection operator; PHQ-9, Patient Health Questionnaire-9.



eFigure 5. Distribution of PHQ-9 Score Across Risk Groups by Sleep Apnea
Risk groups were created based on the LASSO-predicted value using LASSO Model 1 (age, sex, age x sex interaction) and Model 2 (race, ethnicity, socioeconomic-related variables and health behaviors). “High risk” was defined as the top 50% of the predicted value, while “low risk” was defined as the bottom 50% of the predicted value. LASSO, least absolute shrinkage and selection operator; PHQ-9, Patient Health Questionnaire-9.

