

Table S1. Information on scoring each metric of Life's Essential 8.

Metric	Method of measurement	Scoring rubric	
		Points	MEPA score (points)
		100	6
Diet	Mediterranean Eating Pattern for Americans (MEPA)	80	5
		50	4
		25	3
		0	0-2
	Minutes of moderate (or greater) intensity activity per week	Scoring	Points Minutes
		100	≥150
		90	120 – 149
Physical activity	(Each minute of moderate activity should count as 1 minute and each minute of vigorous activity should count as 2 minutes toward the total for the week.)	80	90 – 119
		60	60 – 89
		40	30 – 59
		20	1 – 29
		0	0
	Combustible tobacco used and/or inhaled NDS use; or secondhand smoke exposure	Scoring	Points Status
		100	Never smoker
		75	Former smoker, quit ≥5 years
Nicotine exposure		50	Former smoker, quit 1 -<5 years
		25	Former smoker, quit <1 year, or currently using inhaled NDS
		0	current smoker
			subtract 20 points (unless score is 0) for living with active indoor smoker in home.
	Average hours of sleep per night	Scoring	Points Level
		100	7 – <9
Sleep health		90	9 -<10
		70	6 -<7
		40	5 -<6 or ≥10
		20	4 -<5
		0	<4
	Body weight (kg) divided by height squared (m ²)	Scoring	Points Level
		100	<25
Body mass index (BMI)		70	25.0-29.9
		30	30.0-34.9
		15	35.0-39.9
		0	≥40.0

		Scoring	Points Level
Blood lipids	Non-HDL-cholesterol (mg/dL) = Plasma total cholesterol (mg/dL) - HDL-cholesterol (mg/dL)	100	<130
		60	130-159
		40	160-189
		20	190-219
		0	≥220
If drug-treated level, subtract 20 points.			
		Scoring	Points Level
Blood glucose	Fasting blood glucose (mg/dL) or Hemoglobin A1c (%)	100	No history of diabetes and FBG < 100 (or HbA1c < 5.7)
		60	No diabetes and FBG 100 – 125 (or HbA1c 5.7-6.4) (Pre-diabetes)
		40	Diabetes with HbA1c <7.0
		30	Diabetes with HbA1c 7.0-7.9
		20	Diabetes with HbA1c 8.0-8.9
		10	Diabetes with HbA1c 9.0-9.9
0	Diabetes with HbA1c ≥10.0		
		Scoring	Points Level
Blood pressure	Systolic and diastolic blood pressure (mm Hg)	100	<120/80 (optimal)
		75	120-129/<80 (elevated)
		50	130-139 or 80-89 (stage 1 hypertension)
		25	140-159 or 90-99
		0	≥160 or ≥100
Subtract 20 points if treated level.			

*Cannot meet these metrics until solid foods are being consumed

Table S2. Scanner parameters of MRI sequences

Contrast	Orientation	Voxel /mm³	Parameters	Scan time
T1w MPRAGE	3D sagittal	1.00×1.00×1.00	TE=3.0ms, TR=6.7ms, TI=880ms, shot interval=2000ms, Flip angle=8°	4:30
SWI	3D axial	0.63×0.63×0.80	first TE=7.2ms, echo spacing = 6.2ms, 5 echoes, Flip angle=17°, TR =37ms	2:20
FLAIR imaging	2D axial	0.53×0.53×6.50	TE=110ms, TR=7000ms, TI=2300ms, SPIR fat suppression	2:27
T2w imaging	2D axial	0.51×0.51×6.50	TE=105ms, TR=2500ms, SPIR fat suppression	1:05

T1w MPRAGE indicates T1-weighted magnetization prepared rapid acquisition gradient-echo; SWI, susceptibility-weighted imaging; FLAIR, fluid-attenuated inversion recovery; T2w, T2-weighted.