

Table S1. Definition and scoring approach for quantifying cardiovascular health, as per the American Heart Association’s Life’s Essential 8 score, and as applied in the National Health and Nutrition Examination Surveys.

Domain	CVH Metric	Method of Measurement	Quantification of CVH Metric - Adults (≥20 Years)	Quantification of CVH Metric – Children (Up to 19 Years*)
Health Behaviors	Diet	Measurement: Self-reported daily intake of a DASH-style eating pattern Example tools for measurement: DASH diet score (populations)	Quantiles of DASH-style diet adherence Scoring (Population): <u>Points</u> <u>Quantile</u> 100 ≥95 th %ile (top/ideal diet) 80 75 th – 94 th %ile 50 50 th – 74 th %ile 25 25 th – 49 th %ile 0 1 st – 24 th %ile (bottom/least ideal quartile)	Quantiles of DASH-style diet adherence; ages 2-19 Scoring (Population): <u>Points</u> <u>Quantile</u> 100 ≥95 th %ile (top/ideal diet) 80 75 th – 94 th %ile 50 50 th – 74 th %ile 25 25 th – 49 th %ile 0 1 st – 24 th %ile (bottom/least ideal quartile)
	Physical activity	Measurement: Self-reported minutes of moderate or vigorous physical activity per week Example tools for measurement: NHANES PAQ-K questionnaire	Metric: Minutes of moderate (or greater) intensity activity per week Scoring: <u>Points</u> <u>Minutes</u> 100 ≥150 90 120 – 149 80 90 – 119 60 60 – 89 40 30 – 59 20 1 – 29 0 0	Metric: Minutes of moderate (or greater) intensity activity per week; ages 2-19 years Scoring: <u>Points</u> <u>Minutes</u> 100 ≥420 90 360 – 419 80 300 – 359 60 240 – 299 40 120 – 239 20 1 – 119 0 0
	Nicotine exposure	Measurement: Self-reported use of cigarettes or inhaled nicotine-delivery system	Metric: Combustible tobacco use and/or inhaled NDS use; or secondhand smoke exposure	Metric: Combustible tobacco use and/or inhaled NDS use, or secondhand smoke exposure; ages 12-19

		Example tools for measurement: NHANES SMQ	Scoring: <u>Points</u> <u>Status</u> 100 Never smoker 75 Former smoker, quit ≥5 yrs 50 Former smoker, quit 1 - <5 yrs 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	Scoring: <u>Points</u> <u>Status</u> 100 Never tried 50 Tried any nicotine product, but >30 days ago 25 Currently using inhaled NDS 0 Current combustible use (any within 30 days) Subtract 20 points (unless score is 0) for living with active indoor smoker in home
	Sleep health	Measurement: Self-reported average hours of sleep per night Example tools for measurement: “On average, how many hours of sleep do you get per night?” Consider objective sleep/actigraphy data from wearable technology, if available	Metric: Average hours of sleep per night Scoring: <u>Points</u> <u>Level</u> 100 7 – <9 90 9 - <10 70 6 - <7 40 5 - <6 or ≥10 20 4 - <5 0 <4	Metric: Average hours of sleep per night; ages 16-19 Scoring: <u>Points</u> <u>Level</u> 100 Age-appropriate optimal range 90 <1 hr above optimal range 70 <1 hr below optimal range 40 1 - <2 hrs below or ≥1 hr above optimal 20 2 - <3 hrs below optimal range 0 ≥3 hrs below optimal range
Health Factors	Body mass index	Measurement: Body weight (kg) divided by height squared (m ²) Example tools for measurement: Objective measurement of height and weight	Metric: Body mass index (kg/m ²) Scoring: <u>Points</u> <u>Level</u> 100 <25 70 25.0 – 29.9 30 30.0 – 34.9 15 35.0 – 39.9 0 ≥40.0	Metric: BMI percentiles (%iles) for age and sex; ages 2-19 Scoring: <u>Points</u> <u>Level</u> 100 5 th -- <85 th %ile 70 85 th -- <95 th %ile 30 95 th %ile -- <120% of the 95 th %ile 15 120% of the 95 th %ile -- <140% of the 95 th %ile 0 ≥140% of the 95 th %ile

	Blood lipids Measurement: Plasma total and HDL-cholesterol with calculation of non-HDL-cholesterol Example tools for measurement: Fasting or non-fasting blood sample	Metric: Non-HDL-cholesterol (mg/dL) Scoring: <table><tr><th>Points</th><th>Level</th></tr><tr><td>100</td><td><130</td></tr><tr><td>60</td><td>130 – 159</td></tr><tr><td>40</td><td>160 – 189</td></tr><tr><td>20</td><td>190 – 219</td></tr><tr><td>0</td><td>≥220</td></tr></table> If drug-treated level, subtract 20 points	Points	Level	100	<130	60	130 – 159	40	160 – 189	20	190 – 219	0	≥220	Metric: Non-HDL cholesterol (mg/dL); ages 6-19 Scoring: <table><tr><th>Points</th><th>Level</th></tr><tr><td>100</td><td><100</td></tr><tr><td>60</td><td>100 - 119</td></tr><tr><td>40</td><td>120 - 144</td></tr><tr><td>20</td><td>145 - 189</td></tr><tr><td>0</td><td>≥190</td></tr></table> If drug-treated level, subtract 20 points	Points	Level	100	<100	60	100 - 119	40	120 - 144	20	145 - 189	0	≥190								
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	Blood pressure Measurement: Appropriately measured systolic and diastolic blood pressure	Metric: Systolic and diastolic blood pressure (mm Hg)	Metric: Systolic and diastolic blood pressure (mm Hg) percentiles for ages 8-12 years. For ages ≥13 years, use adult scoring. Scoring:																																

		Example tools for measurement: Appropriately sized blood pressure cuff	Scoring: <table><tr><th>Points</th><th>Level</th></tr><tr><td>100</td><td><120/<80 (Optimal)</td></tr><tr><td>75</td><td>120-129/<80 (Elevated)</td></tr><tr><td>50</td><td>130-139 or 80-89 (Stage I HTN)</td></tr><tr><td>25</td><td>140-159 or 90-99</td></tr><tr><td>0</td><td>≥160 or ≥100</td></tr></table> Subtract 20 points if treated level	Points	Level	100	<120/<80 (Optimal)	75	120-129/<80 (Elevated)	50	130-139 or 80-89 (Stage I HTN)	25	140-159 or 90-99	0	≥160 or ≥100	<table><tr><th>Points</th><th>Level</th></tr><tr><td>100</td><td>Optimal (<90th %ile)</td></tr><tr><td>75</td><td>Elevated (≥90th -- <95th %ile or ≥120/80 mm Hg to <95th %ile, whichever is lower)</td></tr><tr><td>50</td><td>Stage I HTN (≥95th -- <95th %ile + 12mmHg, or 130/80 to 139/89 mm Hg, whichever is lower)</td></tr><tr><td>25</td><td>Stage 2 HTN (≥95th %ile + 12mmHg, or ≥140/90 mm Hg, whichever is lower)</td></tr><tr><td>0</td><td>SBP ≥160 or ≥95th %ile + 30mmHg systolic, whichever is lower; and/or DBP ≥100 or ≥95th %ile + 20 mm Hg diastolic</td></tr></table> Subtract 20 points if treated level	Points	Level	100	Optimal (<90 th %ile)	75	Elevated (≥90 th -- <95 th %ile or ≥120/80 mm Hg to <95 th %ile, whichever is lower)	50	Stage I HTN (≥95 th -- <95 th %ile + 12mmHg, or 130/80 to 139/89 mm Hg, whichever is lower)	25	Stage 2 HTN (≥95 th %ile + 12mmHg, or ≥140/90 mm Hg, whichever is lower)	0	SBP ≥160 or ≥95 th %ile + 30mmHg systolic, whichever is lower; and/or DBP ≥100 or ≥95 th %ile + 20 mm Hg diastolic
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*Cannot meet these metrics until solid foods are being consumed