

بایدهای تندرستی

Life's Essential

دکتر علی معزی

اینترنشنال کاردیولوژیست

دانشیار دانشگاه علوم پزشکی بیرجند



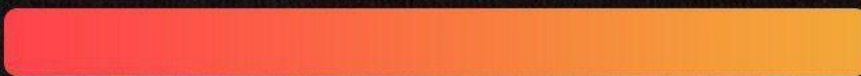


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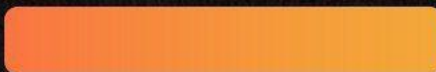
مهم ترین علل مرگ و میر سالانه در بین ایرانیان چیست؟

۱۵۰ هزار نفر
در سال



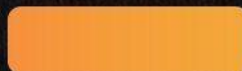
انواع سکتة

۶۰ هزار



سرطان

۱۷ هزار نفر



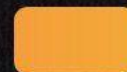
تصادفات رانندگی

۵ هزار نفر



مسمومیت دارویی

۵ هزار نفر



آلودگی هوا

۳ هزار نفر



حوادث طبیعی

۲ هزار نفر



حوادث شغلی

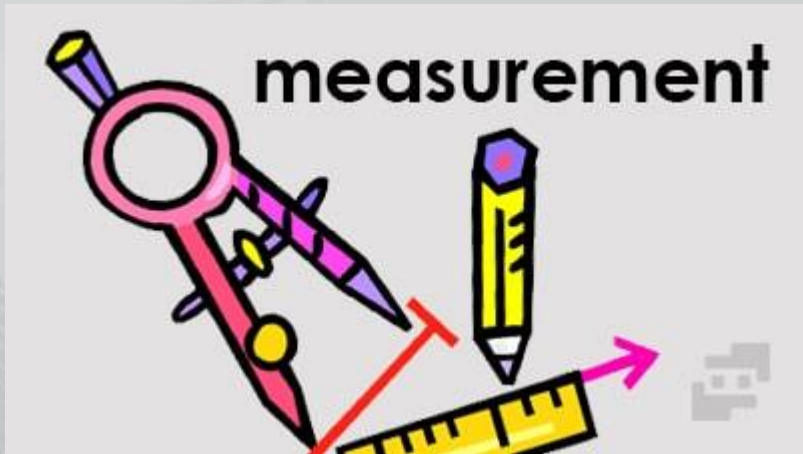
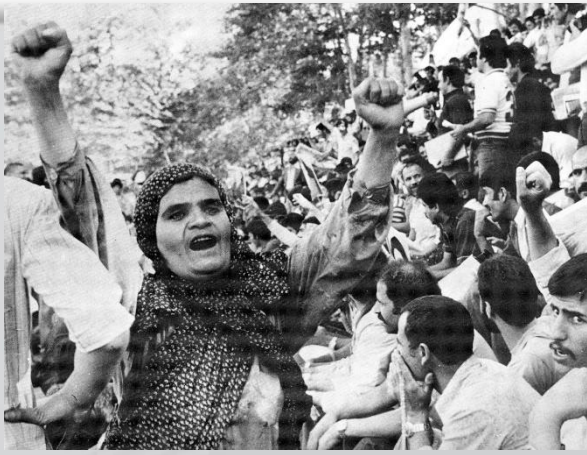
۱+ هزار نفر



نزاع و درگیری



۸۰ درصد مرگ و میر ایرانیان
بر اثر بیماری های غیرواگیر است



**IMPROVE HEART HEALTH NATURALLY:
DIET, EXERCISE, AND LIFESTYLE MATTER**

AHA PRESIDENTIAL ADVISORY

Life's Essential 8: Updating and Enhancing the American Heart Association's Construct of Cardiovascular Health: A Presidential Advisory From the American Heart Association

- Health is a broader than merely the **absence of disease**.
- **A paradigm shift** from a focus on disease treatment to positive **health promotion** across the life in **populations** and **individuals**.
- Actionable components for individuals, practitioners, researchers, and policymakers.

CVH: Cerebro-Vascular Health

Life's Essential 8 :

Health behaviors:

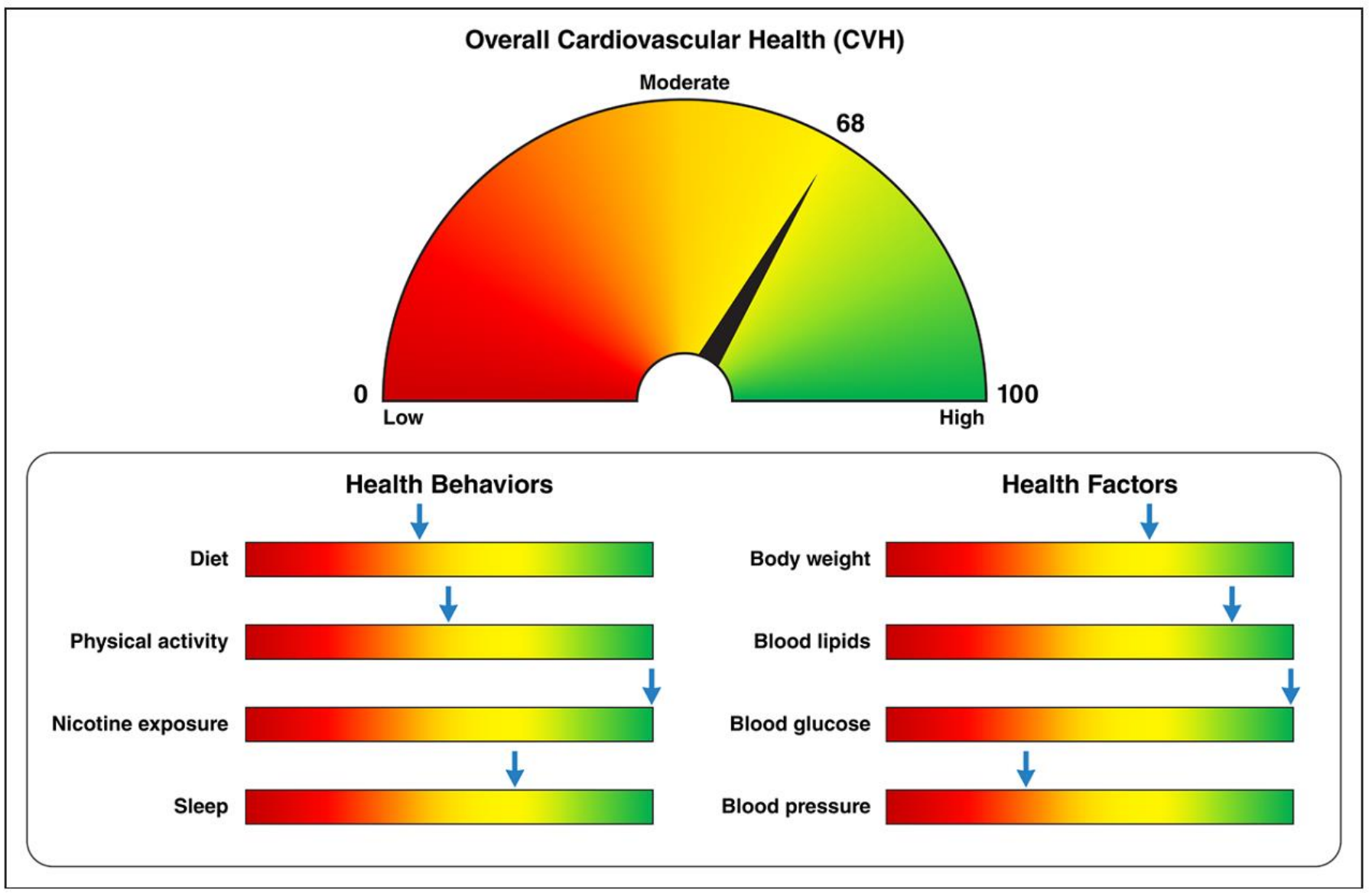
1. healthy diet,
2. participation in physical activity,
3. avoidance of nicotine,
4. healthy sleep,

Health factors:

1. healthy weight,
2. healthy levels of blood lipids,
3. healthy levels blood glucose,
4. healthy levels blood pressure.



Example presentation of CVH score.



Domain	CVH metric	Method of measurement	Quantification of CVH metric: adults (≥20 y of age)	Quantification of CVH metric: children (up to 19 y of age)																																																
Health behaviors	Diet	Measurement: Self-reported daily intake of a DASH-style eating pattern Example tools for measurement: DASH diet score ^{130,131} (populations); MEPA ¹³² (individuals)	Quantiles of DASH-style diet adherence or HEI-2015 (population) Scoring (population): <table border="1"> <thead> <tr> <th>Points</th> <th>Quantile</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>≥95th percentile (top/ideal diet)</td> </tr> <tr> <td>80</td> <td>75th–94th percentile</td> </tr> <tr> <td>50</td> <td>50th–74th percentile</td> </tr> <tr> <td>25</td> <td>25th–49th percentile</td> </tr> <tr> <td>0</td> <td>1st–24th percentile (bottom/least ideal quartile)</td> </tr> </tbody> </table> Scoring (individual): <table border="1"> <thead> <tr> <th>Points</th> <th>MEPA score (points)</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>15–16</td> </tr> <tr> <td>80</td> <td>12–14</td> </tr> <tr> <td>50</td> <td>8–11</td> </tr> <tr> <td>25</td> <td>4–7</td> </tr> <tr> <td>0</td> <td>0–3</td> </tr> </tbody> </table>	Points	Quantile	100	≥95th percentile (top/ideal diet)	80	75th–94th percentile	50	50th–74th percentile	25	25th–49th percentile	0	1st–24th percentile (bottom/least ideal quartile)	Points	MEPA score (points)	100	15–16	80	12–14	50	8–11	25	4–7	0	0–3	Quantiles of DASH-style diet adherence or HEI-2015 (population) or MEPA (individuals)*; ages 2–19 y (see Supplemental Material for younger ages) Scoring (population): <table border="1"> <thead> <tr> <th>Points</th> <th>Quantile</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>≥95th percentile (top/ideal diet)</td> </tr> <tr> <td>80</td> <td>75th–94th percentile</td> </tr> <tr> <td>50</td> <td>50th–74th percentile</td> </tr> <tr> <td>25</td> <td>25th–49th percentile</td> </tr> <tr> <td>0</td> <td>1st–24th percentile (bottom/least ideal quartile)</td> </tr> </tbody> </table> Scoring (individual): <table border="1"> <thead> <tr> <th>Points</th> <th>MEPA score (points)</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>9–10</td> </tr> <tr> <td>80</td> <td>7–8</td> </tr> <tr> <td>50</td> <td>5–6</td> </tr> <tr> <td>25</td> <td>3–4</td> </tr> <tr> <td>0</td> <td>0–2</td> </tr> </tbody> </table>	Points	Quantile	100	≥95th percentile (top/ideal diet)	80	75th–94th percentile	50	50th–74th percentile	25	25th–49th percentile	0	1st–24th percentile (bottom/least ideal quartile)	Points	MEPA score (points)	100	9–10	80	7–8	50	5–6	25	3–4	0	0–2
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HEI, Healthy Eating Index; MEPA, Mediterranean Eating Pattern for Americans

PA	<p>Measurement: Self-reported minutes of moderate or vigorous PA per week</p> <p>Example tools for measurement: NHANES PAQ-K questionnaire¹³³</p>	<p>Metric: Minutes of moderate- (or greater) intensity activity per week</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Minutes</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>≥150</td> </tr> <tr> <td>90</td> <td>120–149</td> </tr> <tr> <td>80</td> <td>90–119</td> </tr> <tr> <td>60</td> <td>60–89</td> </tr> <tr> <td>40</td> <td>30–59</td> </tr> <tr> <td>20</td> <td>1–29</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	<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	<p>Metric: Minutes of moderate- (or greater) intensity activity per week; ages 6–19 y (see notes and Supplemental Material for younger ages)</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Minutes</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>≥420</td> </tr> <tr> <td>90</td> <td>360–419</td> </tr> <tr> <td>80</td> <td>300–359</td> </tr> <tr> <td>60</td> <td>240–299</td> </tr> <tr> <td>40</td> <td>120–239</td> </tr> <tr> <td>20</td> <td>1–119</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </tbody> </table>	<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
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<p>Nicotine exposure</p>	<p>Measurement: Self-reported use of cigarettes or inhaled NDS</p> <p>Example tools for measurement: NHANES SMQ¹³⁴</p>	<p>Metric: Combustible tobacco use or inhaled NDS use; or secondhand smoke exposure</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Status</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>Never smoker</td> </tr> <tr> <td>75</td> <td>Former smoker, quit ≥ 5 y</td> </tr> <tr> <td>50</td> <td>Former smoker, quit 1–<5 y</td> </tr> <tr> <td>25</td> <td>Former smoker, quit <1 y, or currently using inhaled NDS</td> </tr> <tr> <td>0</td> <td>Current smoker</td> </tr> </tbody> </table> <p>Subtract 20 points (unless score is 0) for living with active indoor smoker in home</p>	<u>Points</u>	<u>Status</u>	100	Never smoker	75	Former smoker, quit ≥ 5 y	50	Former smoker, quit 1– <5 y	25	Former smoker, quit <1 y, or currently using inhaled NDS	0	Current smoker	<p>Metric: Combustible tobacco use or inhaled NDS use at any age (per clinician discretion); or secondhand smoke exposure</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Status</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>Never tried</td> </tr> <tr> <td>50</td> <td>Tried any nicotine product, but >30 d ago</td> </tr> <tr> <td>25</td> <td>Currently using inhaled NDS</td> </tr> <tr> <td>0</td> <td>Current combustible use (any within 30 d)</td> </tr> </tbody> </table> <p>Subtract 20 points (unless score is 0) for living with active indoor smoker in home</p>	<u>Points</u>	<u>Status</u>	100	Never tried	50	Tried any nicotine product, but >30 d ago	25	Currently using inhaled NDS	0	Current combustible use (any within 30 d)
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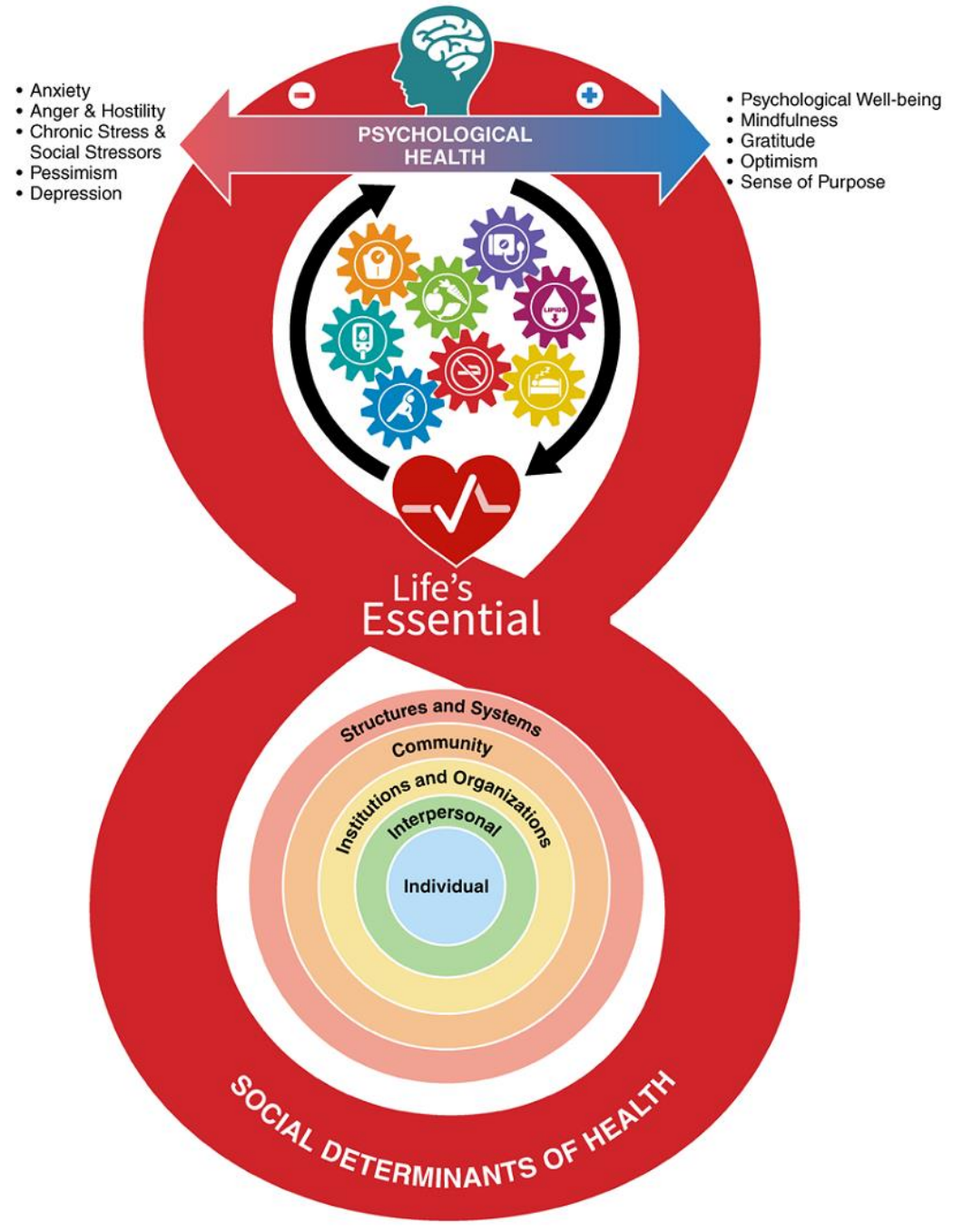
<p>Sleep health</p>	<p>Measurement: Self-reported average hours of sleep per night</p> <p>Example tools for measurement: "On average, how many hours of sleep do you get per night?"</p> <p>Consider objective sleep/actigraphy data from wearable technology if available</p>	<p>Metric: Average hours of sleep per night</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>7-<9</td> </tr> <tr> <td>90</td> <td>9-<10</td> </tr> <tr> <td>70</td> <td>6-<7</td> </tr> <tr> <td>40</td> <td>5-<6 or ≥10</td> </tr> <tr> <td>20</td> <td>4-<5</td> </tr> <tr> <td>0</td> <td><4</td> </tr> </tbody> </table>	<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	<p>Metric: Average hours of sleep per night (or per 24 h for age ≤5 y; see notes for age-appropriate ranges)</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>Age-appropriate optimal range</td> </tr> <tr> <td>90</td> <td><1 h above optimal range</td> </tr> <tr> <td>70</td> <td><1 h below optimal range</td> </tr> <tr> <td>40</td> <td>1-<2 h below or ≥1 h above optimal</td> </tr> <tr> <td>20</td> <td>2-<3 h below optimal range</td> </tr> <tr> <td>0</td> <td>≥3 h below optimal range</td> </tr> </tbody> </table>	<u>Points</u>	<u>Level</u>	100	Age-appropriate optimal range	90	<1 h above optimal range	70	<1 h below optimal range	40	1-<2 h below or ≥1 h above optimal	20	2-<3 h below optimal range	0	≥3 h below optimal range
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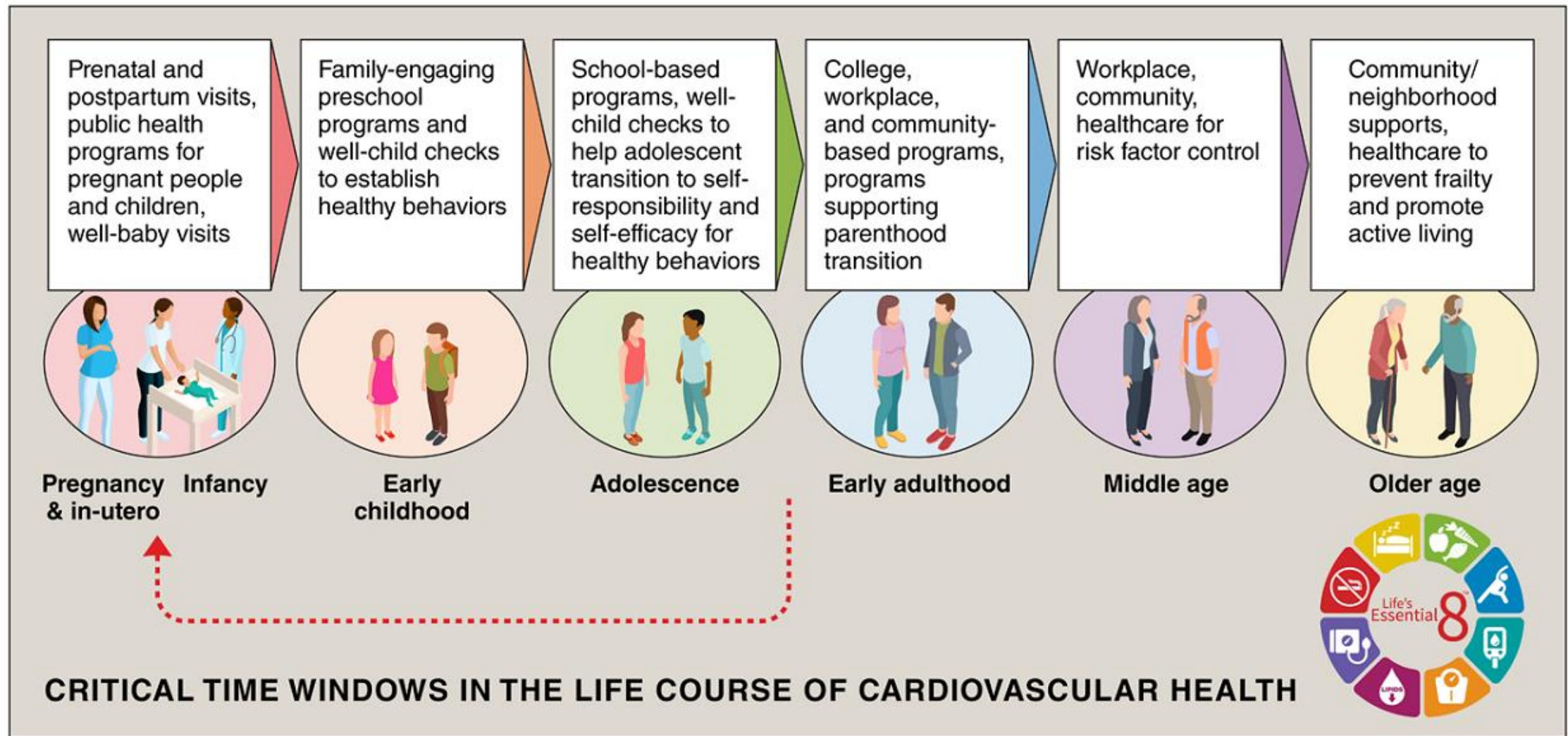
BMI	<p>Measurement: Body weight (kilograms) divided by height squared (meters squared)</p> <p>Example tools for measurement: Objective measurement of height and weight</p>	<p>Metric: BMI (kg/m²)</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td><25</td> </tr> <tr> <td>70</td> <td>25.0–29.9</td> </tr> <tr> <td>30</td> <td>30.0–34.9</td> </tr> <tr> <td>15</td> <td>35.0–39.9</td> </tr> <tr> <td>0</td> <td>≥40.0</td> </tr> </tbody> </table>	<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	<p>Metric: BMI percentiles for age and sex, starting in infancy; see Supplemental Material for suggestions for age <2 y</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>5th–<85th percentile</td> </tr> <tr> <td>70</td> <td>85th–<95th percentile</td> </tr> <tr> <td>30</td> <td>95th percentile–<120% of the 95th percentile</td> </tr> <tr> <td>15</td> <td>120% of the 95th percentile–<140% of the 95th percentile</td> </tr> <tr> <td>0</td> <td>≥140% of the 95th percentile</td> </tr> </tbody> </table>	<u>Points</u>	<u>Level</u>	100	5th–<85th percentile	70	85th–<95th percentile	30	95th percentile–<120% of the 95th percentile	15	120% of the 95th percentile–<140% of the 95th percentile	0	≥140% of the 95th percentile
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<p>Blood lipids</p>	<p>Measurement: Plasma total and HDL cholesterol with calculation of non-HDL cholesterol</p> <p>Example tools for measurement: Fasting or nonfasting blood sample</p>	<p>Metric: Non-HDL cholesterol (mg/dL)</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <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> </tbody> </table> <p>If drug-treated level, subtract 20 points</p>	<u>Points</u>	<u>Level</u>	100	<130	60	130–159	40	160–189	20	190–219	0	≥220	<p>Metric: Non-HDL cholesterol (mg/dL), starting no later than age 9–11 y and earlier per clinician discretion</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <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> </tbody> </table> <p>If drug-treated level, subtract 20 points</p>	<u>Points</u>	<u>Level</u>	100	<100	60	100–119	40	120–144	20	145–189	0	≥190
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<p>Blood glucose</p>	<p>Measurement: FBG or casual HbA1c</p> <p>Example tools for measurement: Fasting (FBG, HbA1c) or non-fasting (HbA1c) blood sample</p>	<p>Metric: FBG (mg/dL) or HbA1c (%)</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>No history of diabetes and FBG <100 (or HbA1c <5.7)</td> </tr> <tr> <td>60</td> <td>No diabetes and FBG 100–125 (or HbA1c 5.7–6.4) (prediabetes)</td> </tr> <tr> <td>40</td> <td>Diabetes with HbA1c <7.0</td> </tr> <tr> <td>30</td> <td>Diabetes with HbA1c 7.0–7.9</td> </tr> <tr> <td>20</td> <td>Diabetes with HbA1c 8.0–8.9</td> </tr> <tr> <td>10</td> <td>Diabetes with Hb A1c 9.0–9.9</td> </tr> <tr> <td>0</td> <td>Diabetes with HbA1c ≥10.0</td> </tr> </tbody> </table>	<u>Points</u>	<u>Level</u>	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) (prediabetes)	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 Hb A1c 9.0–9.9	0	Diabetes with HbA1c ≥10.0	<p>Metric: FBG (mg/dL) or HbA1c (%), symptom-based screening at any age or risk-based screening starting at age ≥10 y of age or onset of puberty per clinician discretion</p> <p>Scoring:</p> <table border="1"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>No history of diabetes and FBG <100 (or HbA1c < 5.7)</td> </tr> <tr> <td>60</td> <td>No diabetes and FBG 100–125 (or HbA1c 5.7–6.4) (prediabetes)</td> </tr> <tr> <td>40</td> <td>Diabetes with HbA1c <7.0</td> </tr> <tr> <td>30</td> <td>Diabetes with HbA1c 7.0–7.9</td> </tr> <tr> <td>20</td> <td>Diabetes with HbA1c 8.0–8.9</td> </tr> <tr> <td>10</td> <td>Diabetes with Hb A1c 9.0–9.9</td> </tr> <tr> <td>0</td> <td>Diabetes with HbA1c ≥10.0</td> </tr> </tbody> </table>	<u>Points</u>	<u>Level</u>	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) (prediabetes)	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 Hb A1c 9.0–9.9	0	Diabetes with HbA1c ≥10.0
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10	Diabetes with Hb A1c 9.0–9.9																																		
0	Diabetes with HbA1c ≥10.0																																		

<p>BP</p>	<p>Measurement: Appropriately measured systolic and diastolic BPs</p> <p>Example tools for measurement: Appropriately sized BP cuff</p>	<p>Metric: Systolic and diastolic BPs (mm Hg)</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <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 1 hypertension)</td> </tr> <tr> <td>25</td> <td>140–159 or 90–99</td> </tr> <tr> <td>0</td> <td>≥160 or ≥100</td> </tr> </tbody> </table> <p>Subtract 20 points if treated level</p>	<u>Points</u>	<u>Level</u>	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	<p>Metric: Systolic and diastolic BP (mm Hg) percentiles for age through 12 y. For age ≥13 y, use adult scoring. Screening should start no later than age 3 y and earlier per clinician discretion</p> <p>Scoring:</p> <table border="0"> <thead> <tr> <th><u>Points</u></th> <th><u>Level</u></th> </tr> </thead> <tbody> <tr> <td>100</td> <td>Optimal (<90th percentile)</td> </tr> <tr> <td>75</td> <td>Elevated (≥90th–<95th percentile or ≥120/80 mm Hg to <95th percentile, whichever is lower)</td> </tr> <tr> <td>50</td> <td>Stage 1 hypertension (≥95th–<95th percentile+12 mm Hg, or 130/80 to 139/89 mm Hg, whichever is lower)</td> </tr> <tr> <td>25</td> <td>Stage 2 hypertension (≥95th percentile+12 mm Hg, or ≥140/90 mm Hg, whichever is lower)</td> </tr> <tr> <td>0</td> <td>Systolic BP ≥160 or ≥95th percentile+30 mm Hg systolic BP, whichever is lower; and/ or diastolic BP ≥100 or ≥95th percentile+20 mm Hg diastolic BP</td> </tr> </tbody> </table> <p>Subtract 20 points if treated level</p>	<u>Points</u>	<u>Level</u>	100	Optimal (<90th percentile)	75	Elevated (≥90th–<95th percentile or ≥120/80 mm Hg to <95th percentile, whichever is lower)	50	Stage 1 hypertension (≥95th–<95th percentile+12 mm Hg, or 130/80 to 139/89 mm Hg, whichever is lower)	25	Stage 2 hypertension (≥95th percentile+12 mm Hg, or ≥140/90 mm Hg, whichever is lower)	0	Systolic BP ≥160 or ≥95th percentile+30 mm Hg systolic BP, whichever is lower; and/ or diastolic BP ≥100 or ≥95th percentile+20 mm Hg diastolic BP
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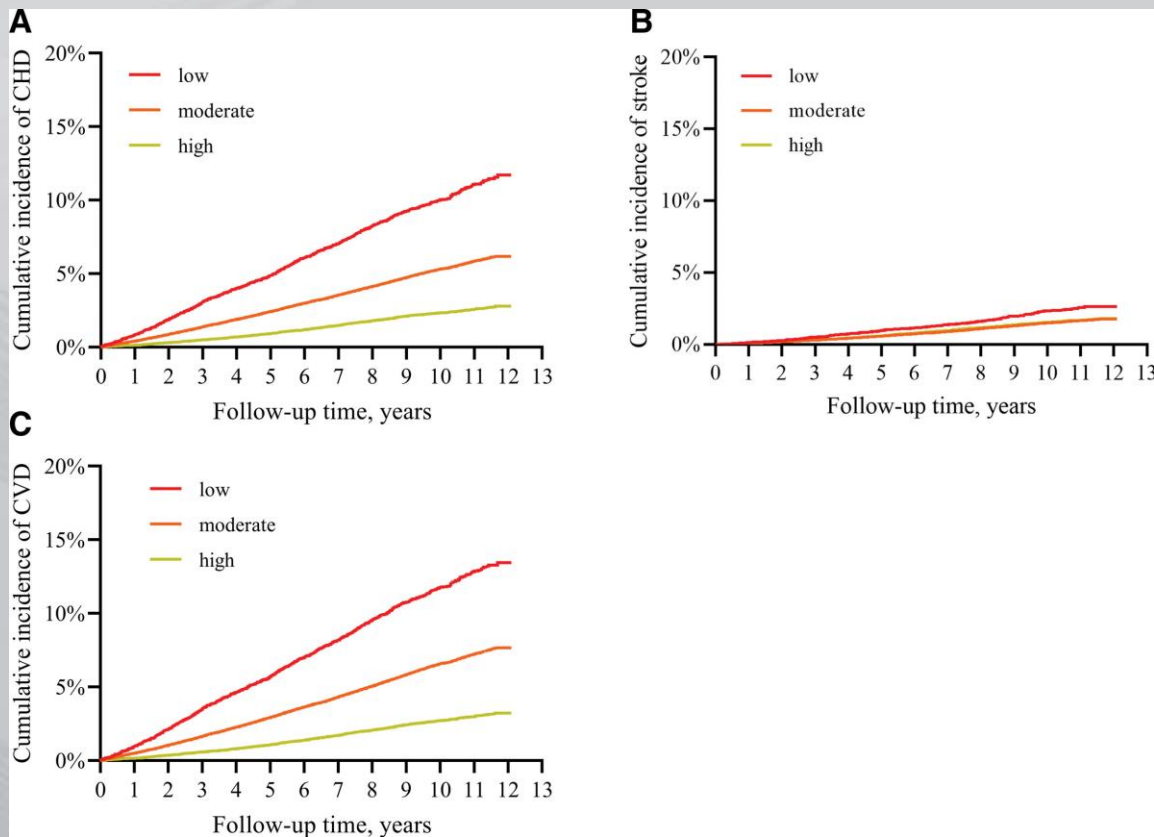




Opportunities to improve CVH occur across public health and policy, institutional, neighborhood- and community-level, and clinical contexts.

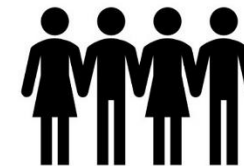
feedback loop of **primordial prevention** strategies that can maintain CVH through early life, leading to **healthier parents & subsequent healthier children**.

participants free of CVD from the **UK Biobank** :
 CVH was scored using LE8 and categorized as low, moderate, and high.



Study population

137,794 participants from UKB



Exposure

Outcome

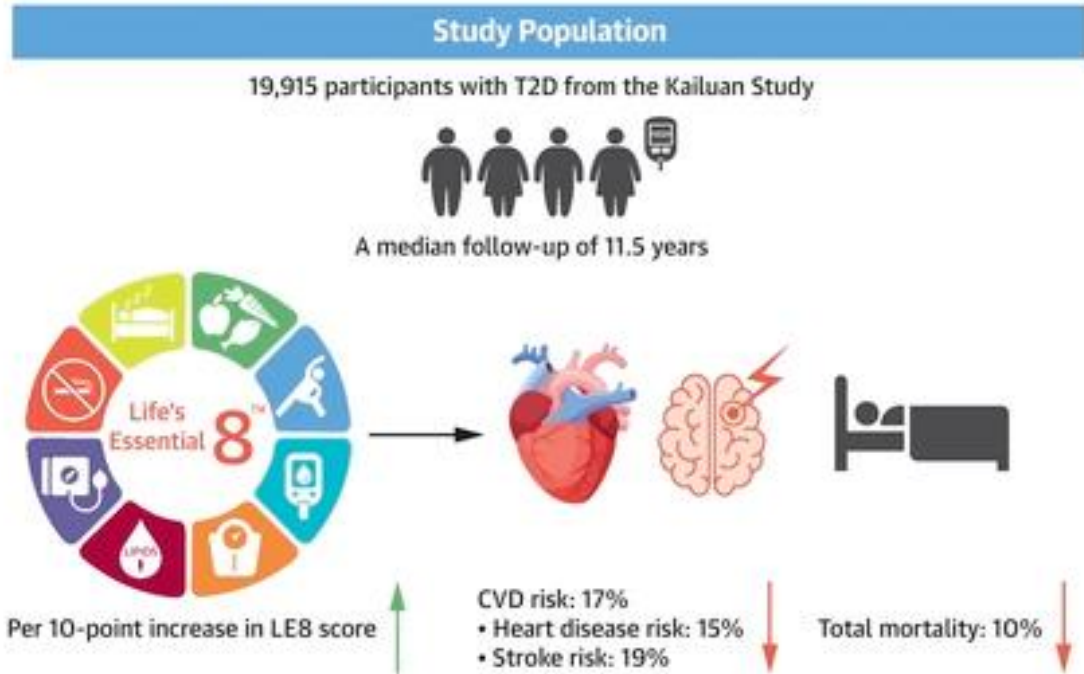


Per SD increase in LE8 score

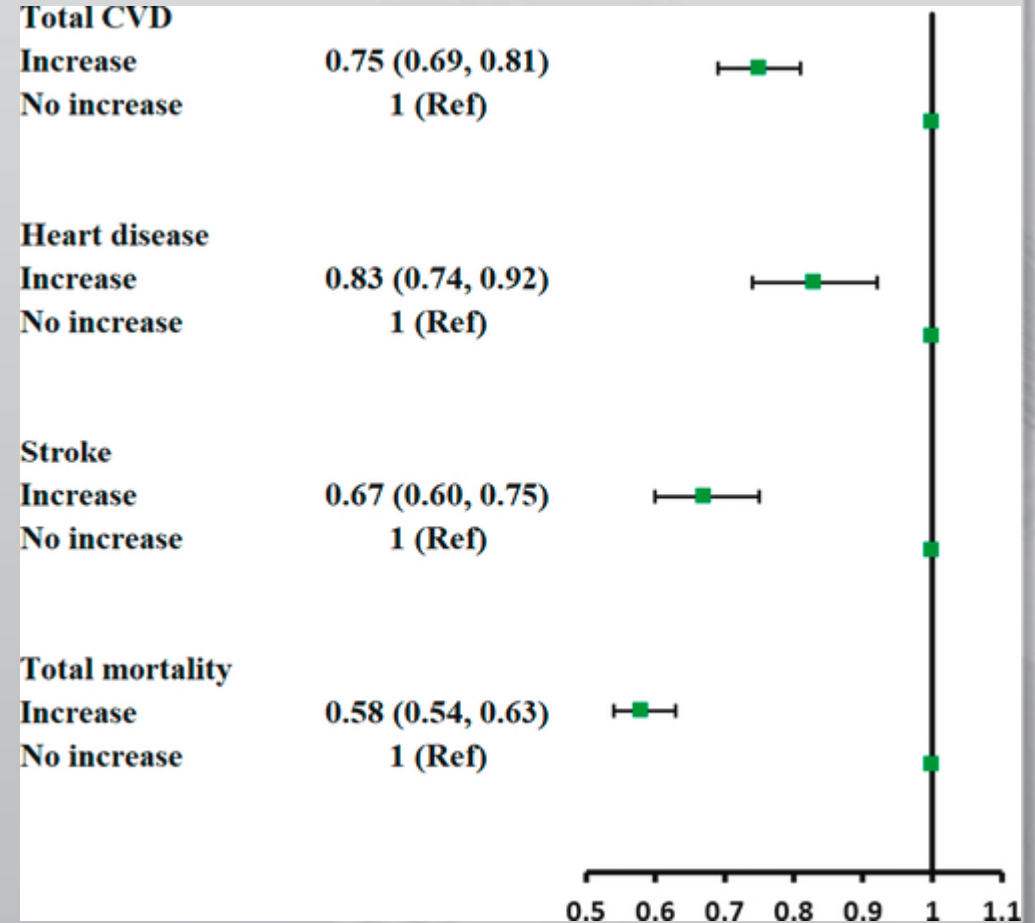
CHD: 29%
 Stroke: 21%
 CVD: 27%



CENTRAL ILLUSTRATION: Life's Essential 8 Linked to Cardiovascular Disease and Mortality Among Individuals With Type 2 Diabetes



Li W, et al. JACC: Asia. 2024;4(6):456-464.

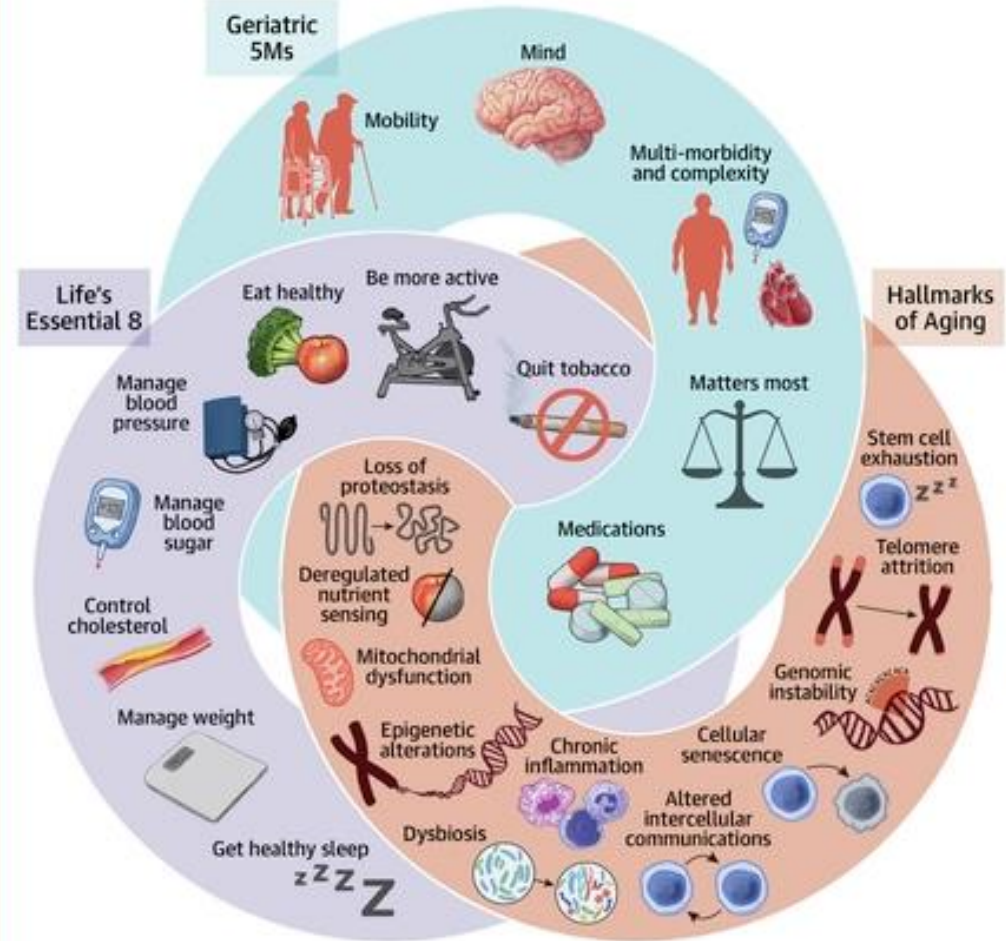


Life's Essential 8

Optimizing Health in Older Adults

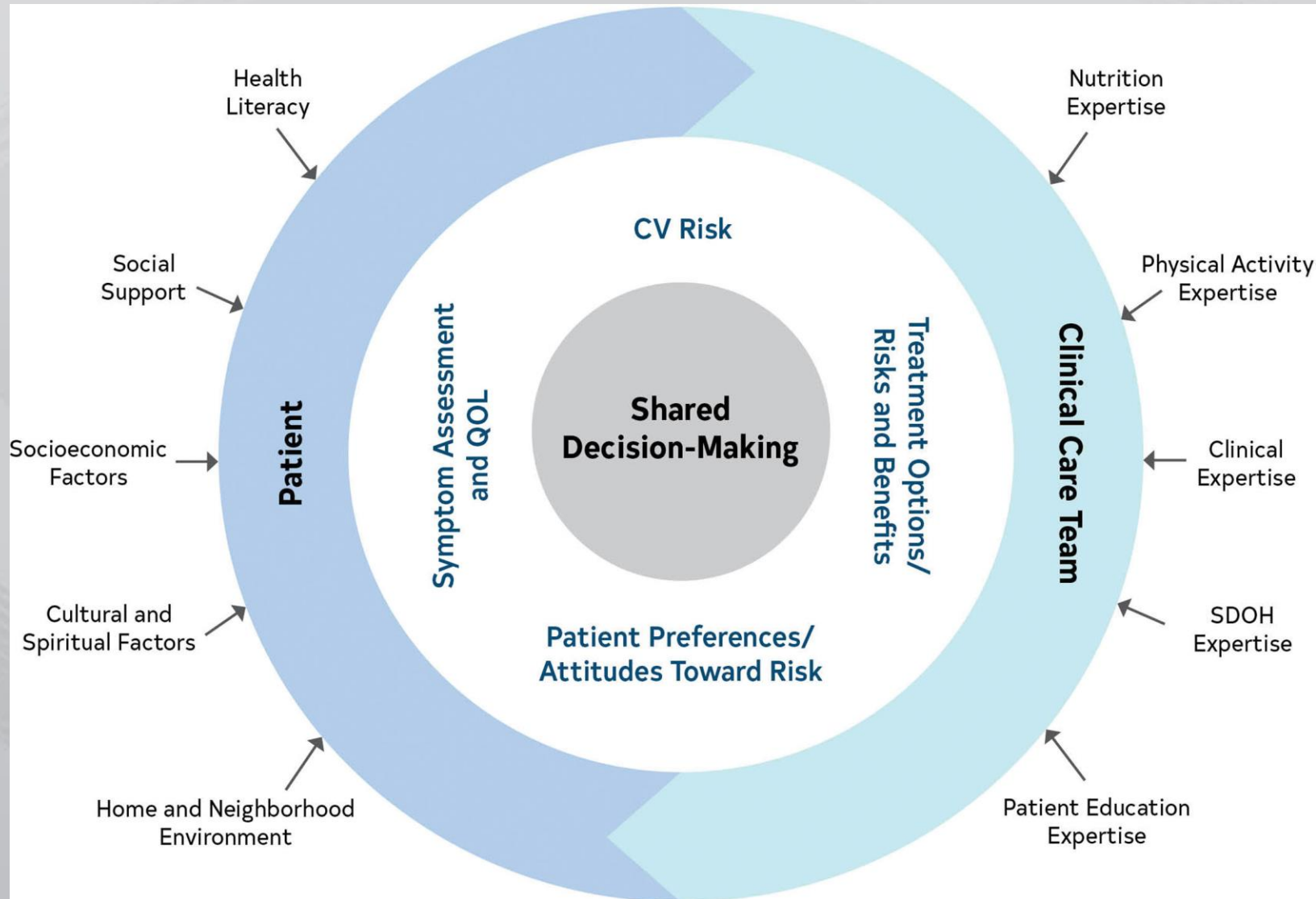
- Optimization of Life Essential 8 components impact aging process at **multiple molecular and cellular levels** and contribute to **healthy aging**, increased lifespan, and **health span**.
- Future studies of gero-therapeutics may identify interventions that can improve cardiovascular health, as well as healthy aging and longevity.

CENTRAL ILLUSTRATION: Highlighting the Interconnection of Cardiovascular Disease Prevention (Life's Essential 8) With the Pathophysiology of Aging (Hallmarks of Aging) and Clinical Focus of Older Adult's Care, Geriatric 5Ms (Mind, Multicomplexity, Medications, Mobility, and What Matters Most)

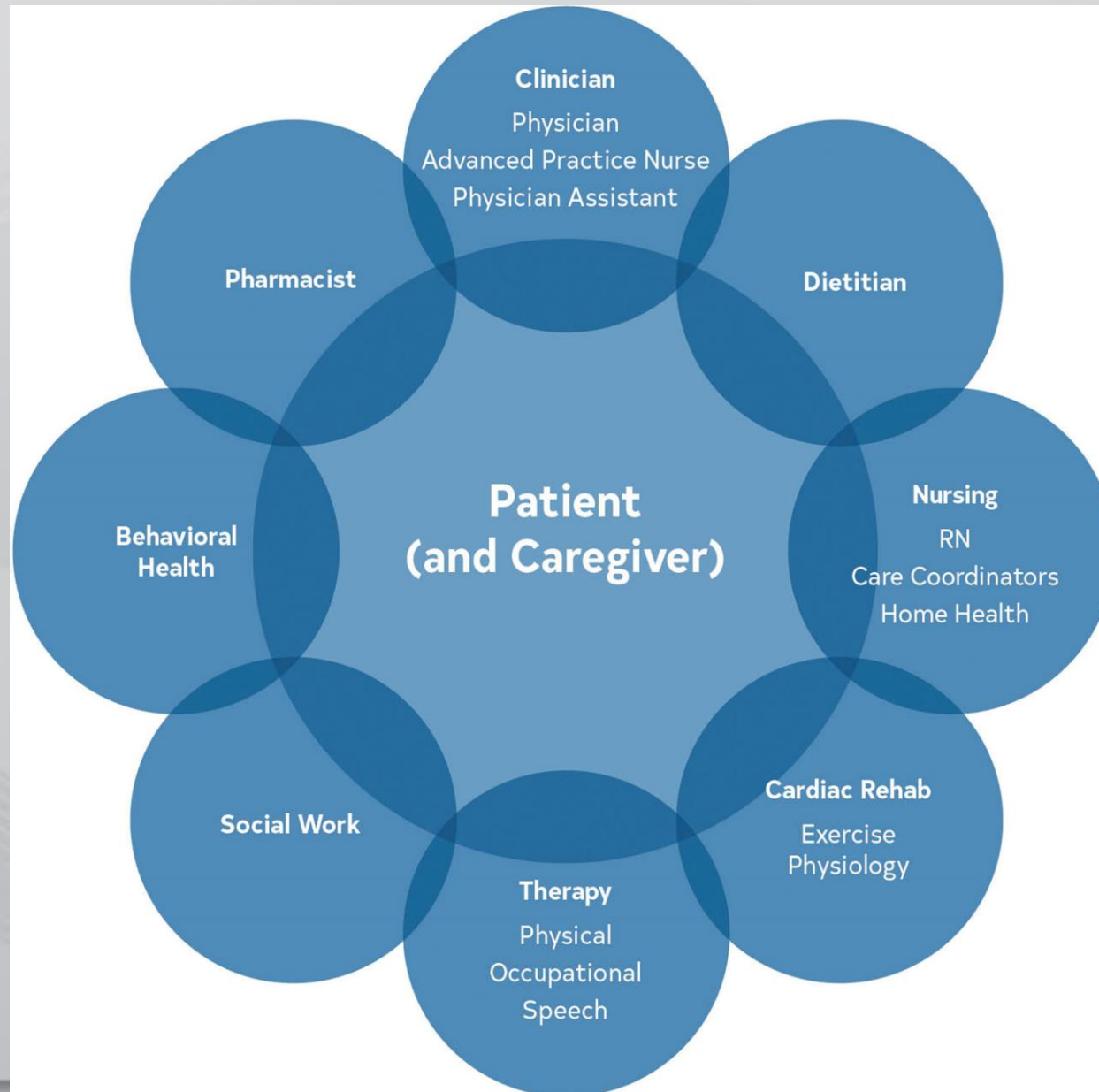


Kumar M, et al. JACC Adv. 2023;2(7):100560.

Domains to Consider in a Patient With CVD



Team-Based Approach for Interconnectedness and Communication



2023 ACC AHA guideline for CCS Nutrition, Including Supplements

CHOOSE THESE

- Vegetables, fruit
- Legumes, nuts
- Whole grains
- Lean protein
- Complex carbohydrates
- Dietary fiber
- Monounsaturated fat (≤20% of daily calories; eg, olive oil)
- Polyunsaturated fat (≤10% of daily calories; eg, salmon)

INSTEAD OF THESE

- Saturated fat (≤6% of daily calories)
- Dietary sodium (1500–<2300 mg/day)
- Processed meat (eg, cured hot dogs)
- Refined carbohydrates (eg, white rice)
- Sugar-sweetened beverages (eg, sugar-added soft drinks, fruit drinks)
- Alcoholic beverages

AVOID TRANS FAT

- Baked goods
- Fried foods with hydrogenated oil/shortening

1	B-R	1. In patients with CCD, a diet emphasizing vegetables, fruits, legumes, nuts, whole grains, and lean protein is recommended to reduce the risk of CVD events.* ¹⁻⁴
2a	B-NR	2. In patients with CCD, reducing the percentage of calories from saturated fat (<6% of total calories) and replacing with dietary monounsaturated and polyunsaturated fat, complex carbohydrates, and dietary fiber can be beneficial to reduce the risk of CVD events.* ¹⁻⁶
2a	B-NR	3. In patients with CCD, minimization of sodium (<2300 mg/d; optimally 1500 mg/d) and minimization of processed meats (eg, cured bacon, hot dogs) can be beneficial to reduce the risk of CVD events.* ^{2,3,6,7}
2a	B-NR	4. In patients with CCD, limiting refined carbohydrates (eg, containing <25% whole grain by weight, including refined cold ready-to-eat breakfast cereal, white bread, white rice), and sugar-sweetened beverages (eg, soft drinks, energy drinks, fruit drinks with added sugars) can be beneficial to reduce the risk of CVD events.* ^{2-4,6,8}
3: Harm	B-NR	5. In patients with CCD, the intake of trans fat should be avoided because trans fat is associated with increased morbidity and mortality rates.* ^{9,10}
Nutrition Supplements		
3: No Benefit	B-NR	6. In patients with CCD, the use of nonprescription or dietary supplements, including omega-3 fatty acid, vitamins C, D, E, beta-carotene, and calcium, is not beneficial to reduce the risk of acute CVD events. ¹¹⁻²²



REFINED
CARBOHYDRATE

VS

COMPLEX
CARBOHYDRATE

LEAN PROTEIN

PROTEIN

+ PROS

- Builds, maintains, and restores muscles




- CONS

- Must be consumed with **carbs** to provide the body with energy. Otherwise the body will tap into protein for energy
- Some animal protein contain high amount of saturated fats

IDEAL SOURCES

- Fish
- chicken breast (skinless)
- Turkey
- Lean meats
- Beans
- Lentils
- Soybeans
- Cottage cheese
- Egg whites
- Greek yogurt



TIPS For optimal health, spread your protein intake throughout the day. 

HIGH FAT PROTEIN

macros per 4oz



SARDINES (CAL: 172)
p: 28g f: 13g c: 0g



HERRING (CAL: 253)
p: 14g f: 20g c: 6g



SALMON (CAL: 235)
p: 23g f: 15g c: 0g



MACKEREL (CAL: 261)
p: 27g f: 20g c: 0g



CHIA SEEDS
(CAL: 565)
p: 26g f: 31g c: 43g



WHOLE EGGS (CAL: 160)
p: 16g f: 12g c: 2g



BEYOND MEAT
(CAL: 270)
p: 20g f: 20g c: 5g



PEANUTS (CAL: 645)
p: 28g f: 56g c: 20g

@trifecta



NUTS, SEEDS & LEGUMES

✓ *Rich in **protein**, **healthy fats**, **fibres**, **vitamins**, and **minerals**.*



Summary of the different kinds of fat

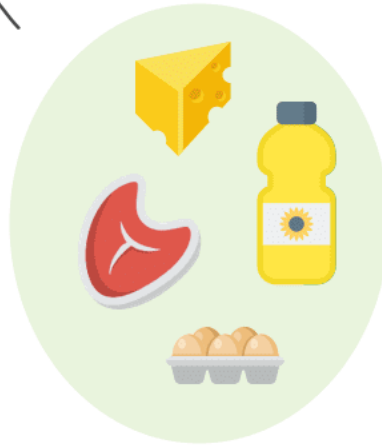
Unsaturated fatty acids

Polyunsaturated

Monounsaturated



Omega-3



Omega-6

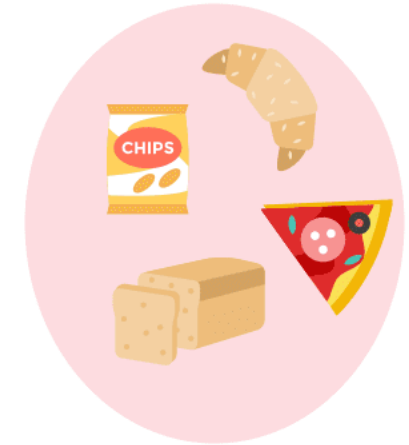


Omega-9

Saturated fatty acids



Industrial « trans » fatty acids



Replace bad fats with good ones

Sauteing



Butter



Olive oil

Baking

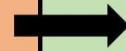


Butter



Avocado

Steak



Salmon

Ground beef



Tofu

Processed snacks

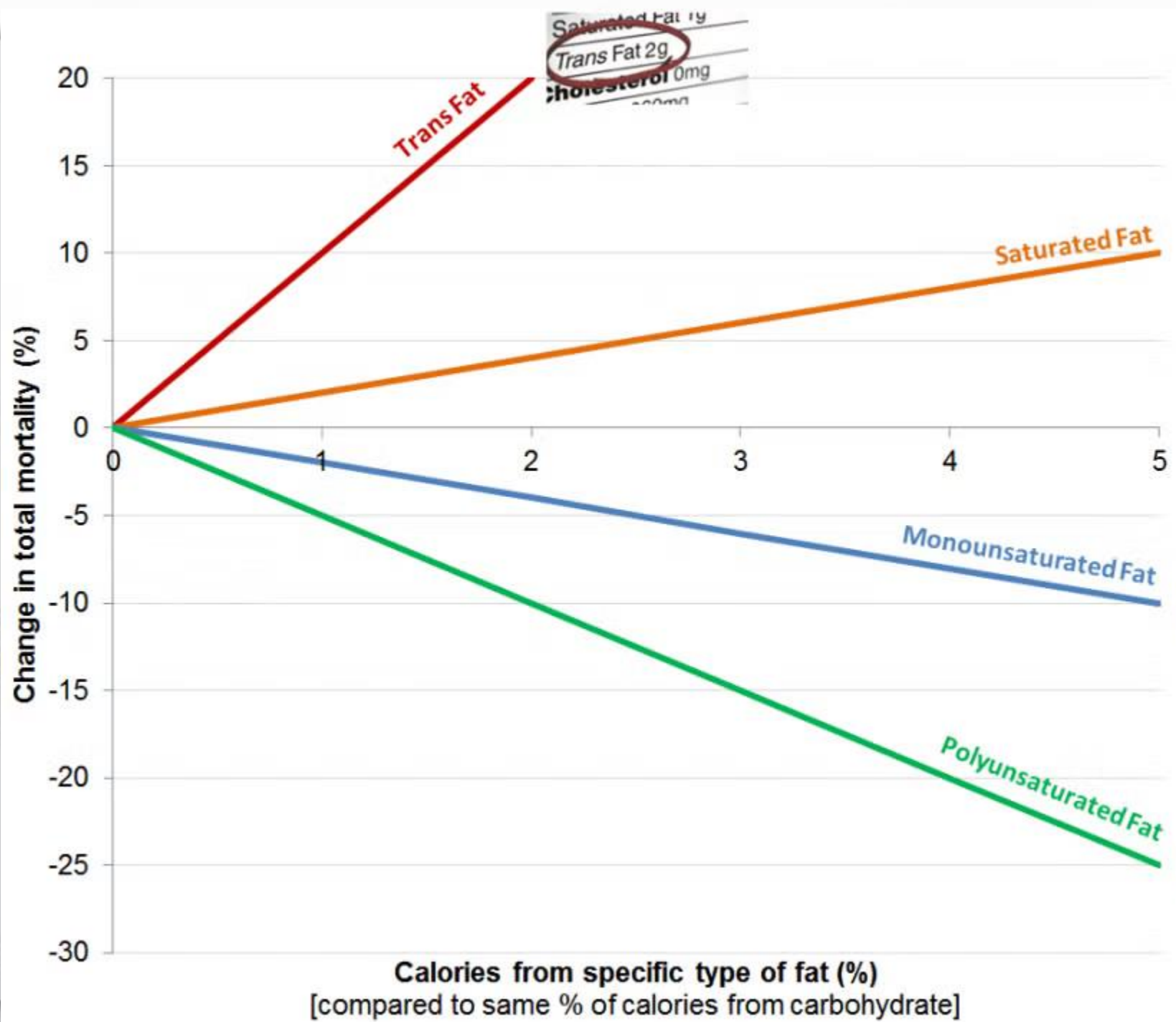


Nuts

Tofu

A creamy, high-protein, low-fat product made from soy milk





Saturated Fat 1g
Trans Fat 2g
 Cholesterol 0mg



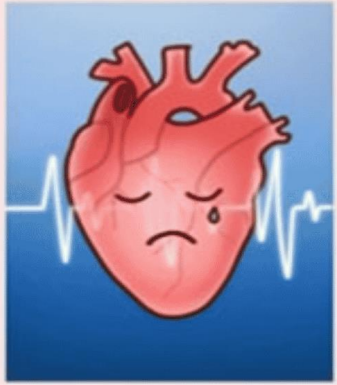


Myocardial Infarction—MI

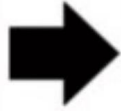
Postinfarction nutrition

1. 1st 24 hrs: no caffeine, liquid diet
(nausea and choking are common)
2. Small frequent meals; soft or liquid diet
3. Na⁺ restriction if BP and fluid status indicate
4. Consistent diet information
5. Drugs that cause nausea—digitalis, morphine

Heart Failure Patients



Stages: A,B,C & D



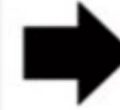
DASH Diet

Limit salt, fatty meats, sweets, sugar sweetened beverages & full-fat dairy products



Eat vegetables, fruits, whole grain, low-fat dairy, poultry, fish, nuts, seeds & vegetable oils

Individual level recommendation as part of the patient's comprehensive care plan



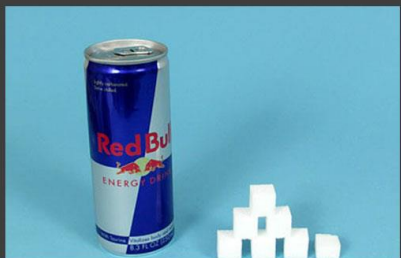
Potential Improvements in:

- Blood pressure
- Body weight
- LDL cholesterol
- Cardiac function
- Arterial compliance
- Exercise capacity
- Quality of life

Outcomes

Risk Assessment & Reduction, Disease Management & Monitoring & Extended Lifespan

خوشمزه های خطرناک!



نمک آبی

دلمک

نمک صورتی

نمک دریا

- * جایگزین نمک تصفیه شده
- * درمان تیروئید
- * درمان گزش عقرب
- * درمان زخم و ورم
- * درمان خار پاشنه
- * تمیز کننده دندانها
- * از بین برنده بوی بد پا



... و عطاری مسکین



آداب غذا خوردن



سپاسگزارم



س انسان باید به خوراکش باامل بندر

فَلْيَنْظُرِ الْإِنْسَانُ إِلَىٰ طَعَامِهِ

