Life's Essential 8

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Boulder Community Health

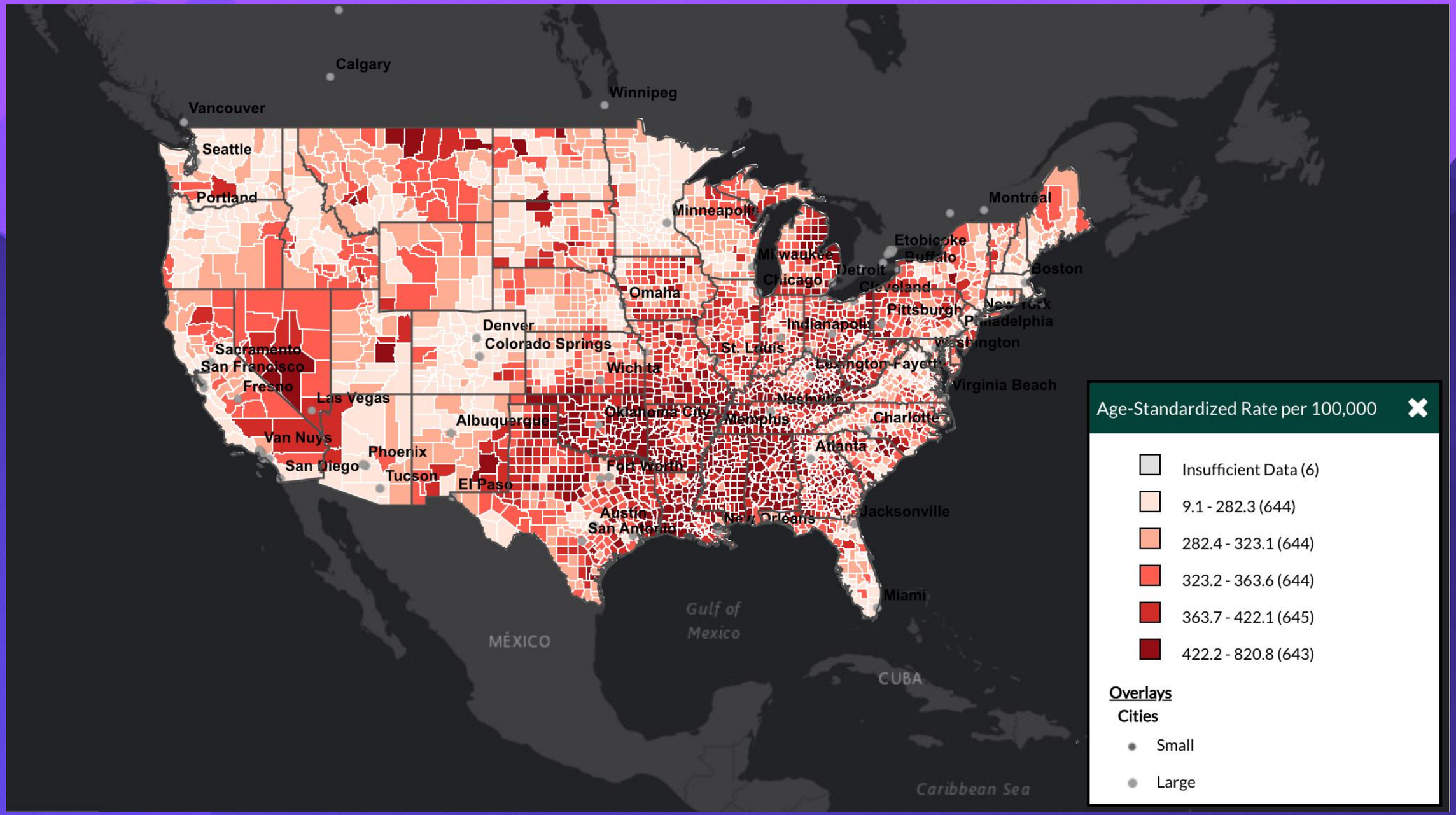
Cardiovascular Risk Reduction

The Essential 8 - an update

John Schutz, MD, FACC

Cardiovascular Disease is very common

- Heart disease is the leading cause of death for men, women, and people of most ethnic and racial groups of the United States
- Every 33 seconds, someone dies of a cardiovascular disease related issue
- Someone in the United States has a heart attack every 40 seconds
- Nearly 703,000 people died in 2022 from heart disease in the United States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San Diego
Fort Worth
Tucson
El Paso
Jacksonville
Austin
San Antonio
Miami
Gulf of Mexico
MÉXICO
CUBA
Caribbean Sea
Age-Standardized Rate per 100,000
Insufficient Data (6)
9.1 - 282.3 (644)
282.4 - 323.1 (644)
323.2 - 363.6 (644)
363.7 - 422.1 (645)
422.2 - 820.8 (643)
Overlays
Cities
Small
Large

- In the United States, the prevalence of ideal Cardiovascular Health (CVH) is exceptionally low (<1%) across all age groups
- Cardiovascular Health declines with age and the prevalence of ideal CVH for those > 60 years of age is only 4% (only 11% for ages 40-59)
- Lower socioeconomic status tends to confer worsening CVH
- Significant differences in CVH exist in self reported race and ethnicity
- High CVH differs geographically
- Ideal CVH is <1% in pregnancy

CV Disease is very costly

Projections – CVD Total Costs Through 2035

	Current	2035
Medical costs up 135 percent	$318 billion	$749 billion
Indirect costs up 55 percent (Lost productivity)	$237 billion	$368 billion
TOTAL COSTS	**$555 billion**	**$1.1 trillion**

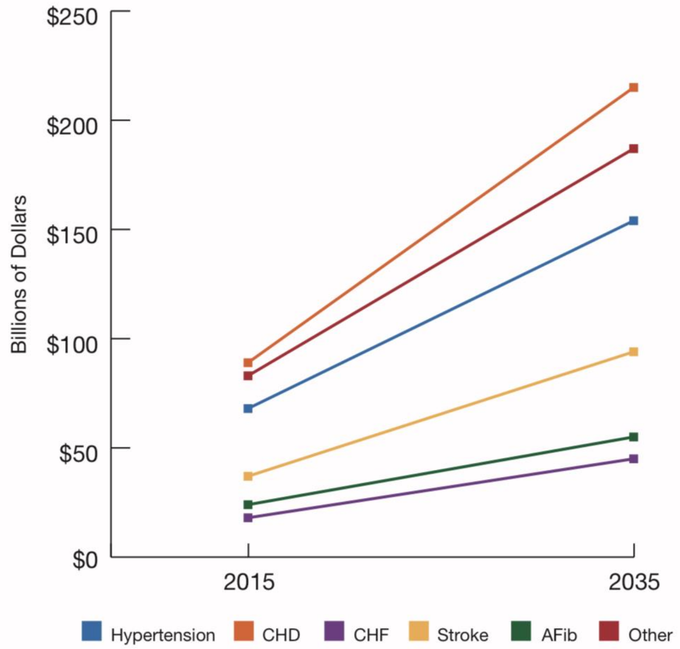
Projections – CVD Indirect Costs Through 2035

	Current	2035
High Blood Pressure	$42 billion	$67 billion
CHD	$99 billion	$151 billion
CHF	$11 billion	$19 billion
Stroke	$30 billion	$49 billion
AFib	$7 billion	$11 billion
Other	$48 billion	$71 billion
TOTAL COSTS	**$237 billion**	**$368 billion**

Projections – CVD Medical Costs Through 2035

	Current	2035
High Blood Pressure	$68 billion	$154 billion
CHD	$89 billion	$215 billion
CHF	$18 billion	$45 billion
Stroke	$37 billion	$94 billion
AFib	$24 billion	$55 billion
Other	$83 billion	$187 billion
TOTAL MEDICAL COSTS	**$318 billion**	**$749 billion**

Projected CVD Direct Costs Through 2035 by Condition



For every $6 spent on health care, $1 goes toward CV disease

Life’s Simple 7

An aggressive approach

- Introduced in 2010
- The 10 year goal was a 20% reduction in cardiovascular disease and stroke
- Secondary goal was 20% improvement in cardiovascular health

Life’s Essential 8

2022 upgrade

Two major components

Health Behaviors

- Be Active, Quit Smoking, Eat Well, Sleep Well

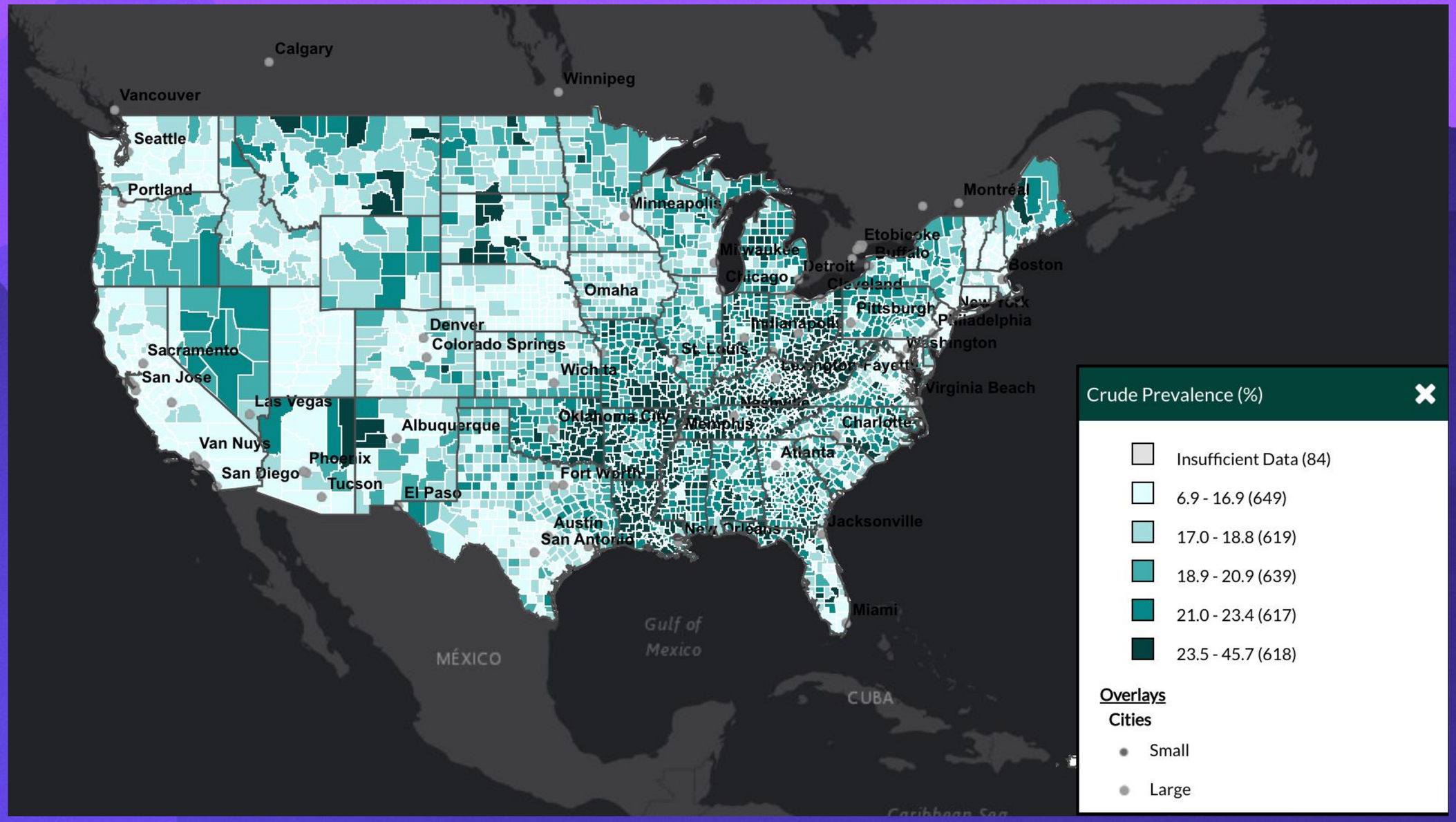
Health Factors

- Manage Weight, Control Cholesterol, Glucose, and Blood Pressure

Quit Tobacco

Modifiable

- Inhaled tobacco products
  - Traditional cigarettes, E cigarettes, and vaping
- Leading cause of preventable death in the US
- 1/3 of all CV deaths
- 40% of US children (age 3-11) are exposed to second hand smoke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Pittsburgh
Denver
Colorado Springs
Indianapolis
Philadelphia
Washington
Sacramento
St. Louis
San Jose
Wichita
Virginia Beach
Las Vegas
Nashville
Albuquerque
Oklahoma City
Memphis
Charlotte
Van Nuys
Atlanta
Phoenix
San Diego
Fort Worth
Tucson
El Paso
Jacksonville
Austin
San Antonio
Miami
Gulf of Mexico
MÉXICO
CUBA
Crude Prevalence (%)
Insufficient Data (84)
6.9 - 16.9 (649)
17.0 - 18.8 (619)
18.9 - 20.9 (639)
21.0 - 23.4 (617)
23.5 - 45.7 (618)
Overlays
Cities
Small
Large

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HOW TO QUIT TOBACCO

EDUCATE YOURSELF

The first step to quitting smoking, vaping and using tobacco is to understand the risks and health effects for you and your family.

- Within 1 year after quitting, your risk of heart disease goes down by half.
- Smoking is the most preventable cause of death in the U.S. It's linked to about one third of all deaths from heart disease and 90% of lung cancers.
- Smoking damages your circulatory system and increases your risk of multiple diseases.
- Cigarettes, e-cigarettes and tobacco products contain many toxic chemicals, as do their smoke, vapor and liquids.
- Tobacco use and nicotine addiction is a growing crisis for teens and young adults. You can be one of the millions of people who successfully quit every year.
- Vaping and secondhand smoke
- About half of U.S. children ages 3-11 are exposed to secondhand smoke and vapor.

MAKE A PLAN TO QUIT

You're more likely to quit tobacco for good if you prepare by creating a plan that fits your lifestyle.

SET a quit date within the next 7 days.

CHOOSE a method: cold turkey or gradually.

DECIDE if you need help from a health care professional, nicotine replacement or medicine.

PREPARE for your quit day by planning how to deal with cravings and urges

QUIT on your quit day.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

DEAL WITH URGES

Whether physical or mental, learn your triggers and make a plan to address them. Avoid situations that make you want to smoke or use tobacco until you're confident that you can handle them.

GET ACTIVE

Physical activity can help you manage the stress and cravings when quitting. You'll feel better, too.

HANDLE STRESS

Learn other healthy ways to manage the stress of quitting.

GET SUPPORT

A buddy system or support program can help you with some of the common struggles of quitting. 1-800-QuitNow

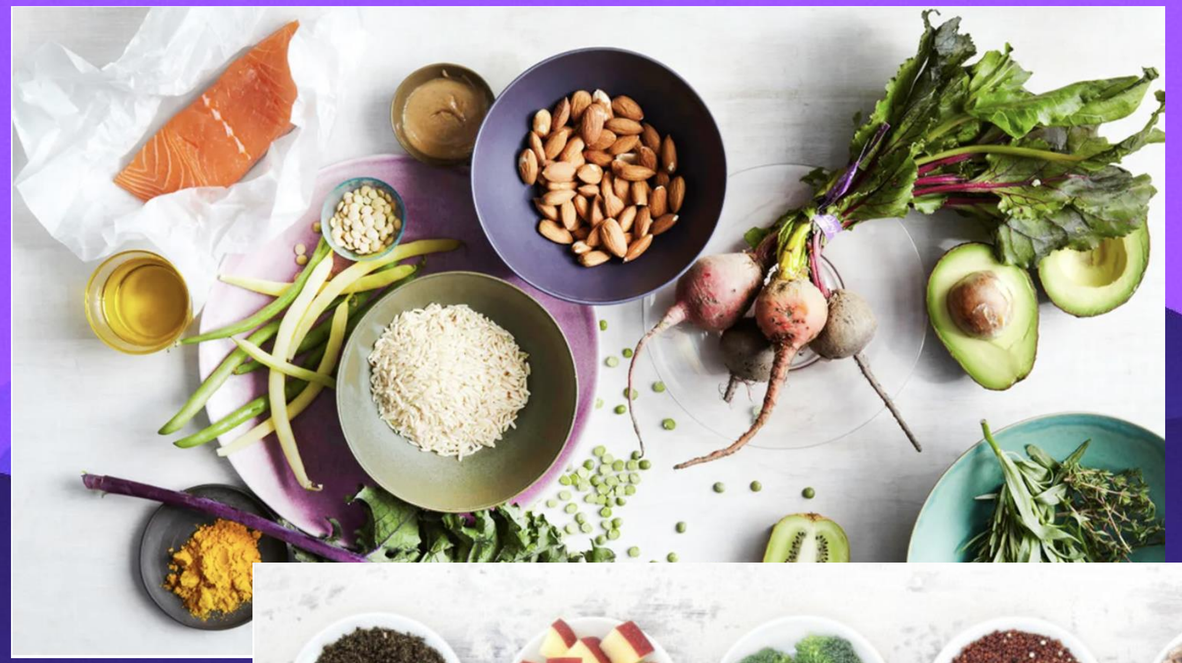
STICK WITH IT

Quitting tobacco takes a lot of willpower. Reward yourself when you reach milestones and forgive yourself if you take a step backward. Get back on course as soon as possible to stay on track and kick the habit for good.

Eat Better

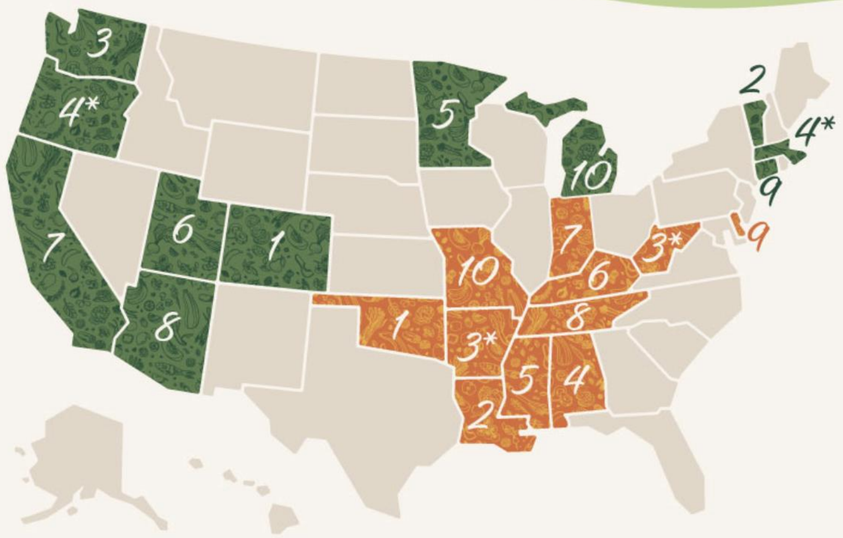
Modifiable

- Increase fruits and vegetables
- Limit sugary drinks and alcohol
- Avoid processed foods
- Plant based diet
- Watch calories
- Eat at home



The U.S. States with the Healthiest and Unhealthiest Eaters

Based on Survey Responses From Over 2,000 Americans



States With the Healthiest Eaters

Rank	State	Score
1	Colorado	6.86
2	Vermont	6.62
3	Washington	6.45
4*	Massachusetts | Oregon	6.44
5	Minnesota	6.32
6	Utah	6.20
7	California	6.16
8	Arizona	6.14
9	Connecticut	6.10
10	Michigan	6.08

States With the Unhealthiest Eaters

Rank	State	Score
1	Oklahoma	5.02
2	Louisiana	5.10
3*	Arkansas | West Virginia	5.18
4	Alabama	5.20
5	Mississippi	5.27
6	Kentucky	5.28
7	Indiana	5.34
8	Tennessee	5.36
9	Delaware	5.48
10	Missouri	5.52

**Indicates a tie*

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HOW TO EAT BETTER

CREATE A HEALTHY EATING PATTERN

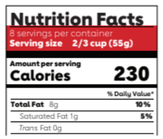
Make smart choices and swaps to build an overall healthy eating style. Watch calories and eat smaller portions.

ENJOY vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins, skinless poultry, fish and seafood.

LIMIT sweetened drinks, alcohol, sodium, red and processed meats, refined carbohydrates like added sugars and processed grain foods, full-fat dairy products, highly processed foods, tropical oils like coconut and palm.

AVOID trans fat and partially hydrogenated oils (found in some commercial baked goods and fried foods).

READ NUTRITION LABELS



Learning how to read and understand food labels can help you make healthier choices.

When you have more than one choice, compare nutrition facts. Choose products with lower amounts of sodium, saturated fat and added sugars.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

WATCH CALORIES

Eat only as many calories as you use up through physical activity. Understand serving sizes and keep portions reasonable.

COOK AT HOME

Take control over the nutritional content of your food by learning healthy preparation methods.

LOOK FOR THE HEART-CHECK

The Heart-Check mark helps you find foods that can be part of a healthy eating plan.

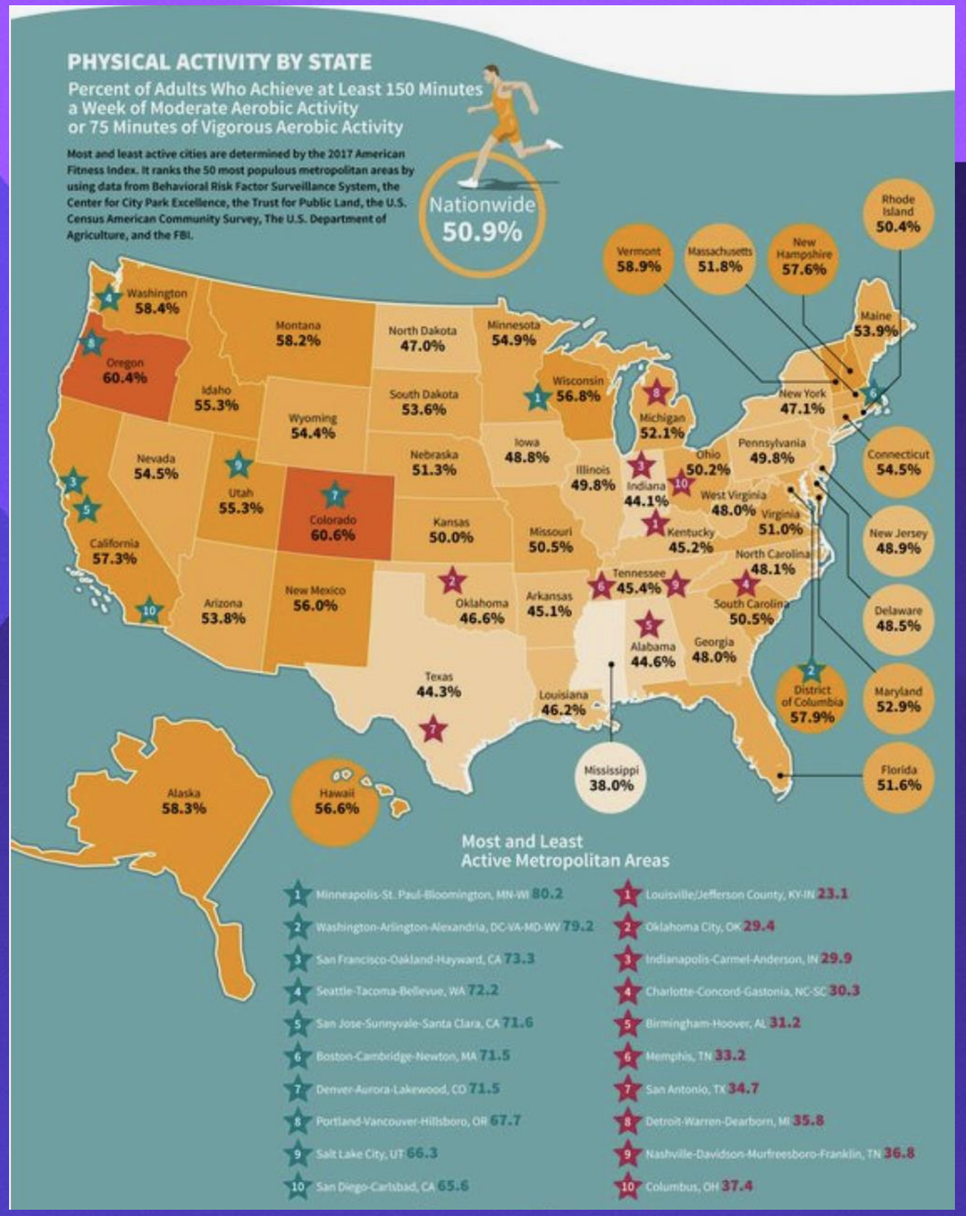
IN NEED OF INSPIRATION?

The American Heart Association has hundreds of heart-healthy recipes to choose from.

Move More

Modifiable

- Walk more
- Weight training
- Add time and distance
- Make it a habit
- Partner up


PHYSICAL ACTIVITY BY STATE
Percent of Adults Who Achieve at Least 150 Minutes a Week of Moderate Aerobic Activity or 75 Minutes of Vigorous Aerobic Activity
Most and least active cities are determined by the 2017 American Fitness Index. It ranks the 50 most populous metropolitan areas by using data from Behavioral Risk Factor Surveillance System, the Center for City Park Excellence, the Trust for Public Land, the U.S. Census American Community Survey, The U.S. Department of Agriculture, and the FBI.
Nationwide 50.9%
Washington 58.4%
Oregon 60.4%
California 57.3%
Nevada 54.5%
Idaho 55.3%
Montana 58.2%
Wyoming 54.4%
Utah 55.3%
Colorado 60.6%
Arizona 53.8%
New Mexico 56.0%
North Dakota 47.0%
South Dakota 53.6%
Nebraska 51.3%
Kansas 50.0%
Oklahoma 46.6%
Texas 44.3%
Minnesota 54.9%
Iowa 48.8%
Missouri 50.5%
Arkansas 45.1%
Louisiana 46.2%
Wisconsin 56.8%
Illinois 49.8%
Michigan 52.1%
Indiana 44.1%
Ohio 50.2%
Kentucky 45.2%
Tennessee 45.4%
Mississippi 38.0%
Alabama 44.6%
Georgia 48.0%
Florida 51.6%
South Carolina 50.5%
North Carolina 48.1%
Virginia 51.0%
West Virginia 48.0%
Pennsylvania 49.8%
New York 47.1%
Vermont 58.9%
Massachusetts 51.8%
New Hampshire 57.6%
Maine 53.9%
Rhode Island 50.4%
Connecticut 54.5%
New Jersey 48.9%
Delaware 48.5%
Maryland 52.9%
District of Columbia 57.9%
Alaska 58.3%
Hawaii 56.6%
Most and Least Active Metropolitan Areas
1 Minneapolis-St. Paul-Bloomington, MN-WI 80.2
2 Washington-Arlington-Alexandria, DC-VA-MD-WV 79.2
3 San Francisco-Oakland-Hayward, CA 73.3
4 Seattle-Tacoma-Bellevue, WA 72.2
5 San Jose-Sunnyvale-Santa Clara, CA 71.6
6 Boston-Cambridge-Newton, MA 71.5
7 Denver-Aurora-Lakewood, CO 71.5
8 Portland-Vancouver-Hillsboro, OR 67.7
9 Salt Lake City, UT 66.3
10 San Diego-Carlsbad, CA 65.6
1 Louisville/Jefferson County, KY-IN 23.1
2 Oklahoma City, OK 29.4
3 Indianapolis-Carmel-Anderson, IN 29.9
4 Charlotte-Concord-Gastonia, NC-SC 30.3
5 Birmingham-Hoover, AL 31.2
6 Memphis, TN 33.2
7 San Antonio, TX 34.7
8 Detroit-Warren-Dearborn, MI 35.8
9 Nashville-Davidson-Murfreesboro-Franklin, TN 36.8
10 Columbus, OH 37.4

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HOW TO BE MORE ACTIVE

MOVE MORE

Adults should get a weekly total of at least

150 MINUTES
of moderate aerobic activity
(water aerobics, social dancing, gardening)

OR

75 MINUTES
of vigorous aerobic activity
(running, swimming laps, jumping rope)

Or a combination of both, spread throughout the week.

BE STRONG
Include muscle-strengthening activity (like resistance or weight training) at least twice a week.

ADD INTENSITY
Increase time, distance, amount or effort for more benefits.

SIT LESS
Get up and move throughout the day.

KIDS & TEENS

should get at least 60 minutes of physical activity every day, including play and structured activities.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

SET GOALS
Set realistic goals and make small, lasting changes to prime yourself for success.

KEEP GOING
Once you reach these goals, don't stop. Gradually increase your activity and intensity to gain even more health benefits.

WALK MORE
There are many ways to get active. You may find walking the easiest way to start.

STAY ACTIVE
Not only can it help you feel, think, sleep and live better, staying active also improves overall quality of life. Every active minute counts toward your goal.

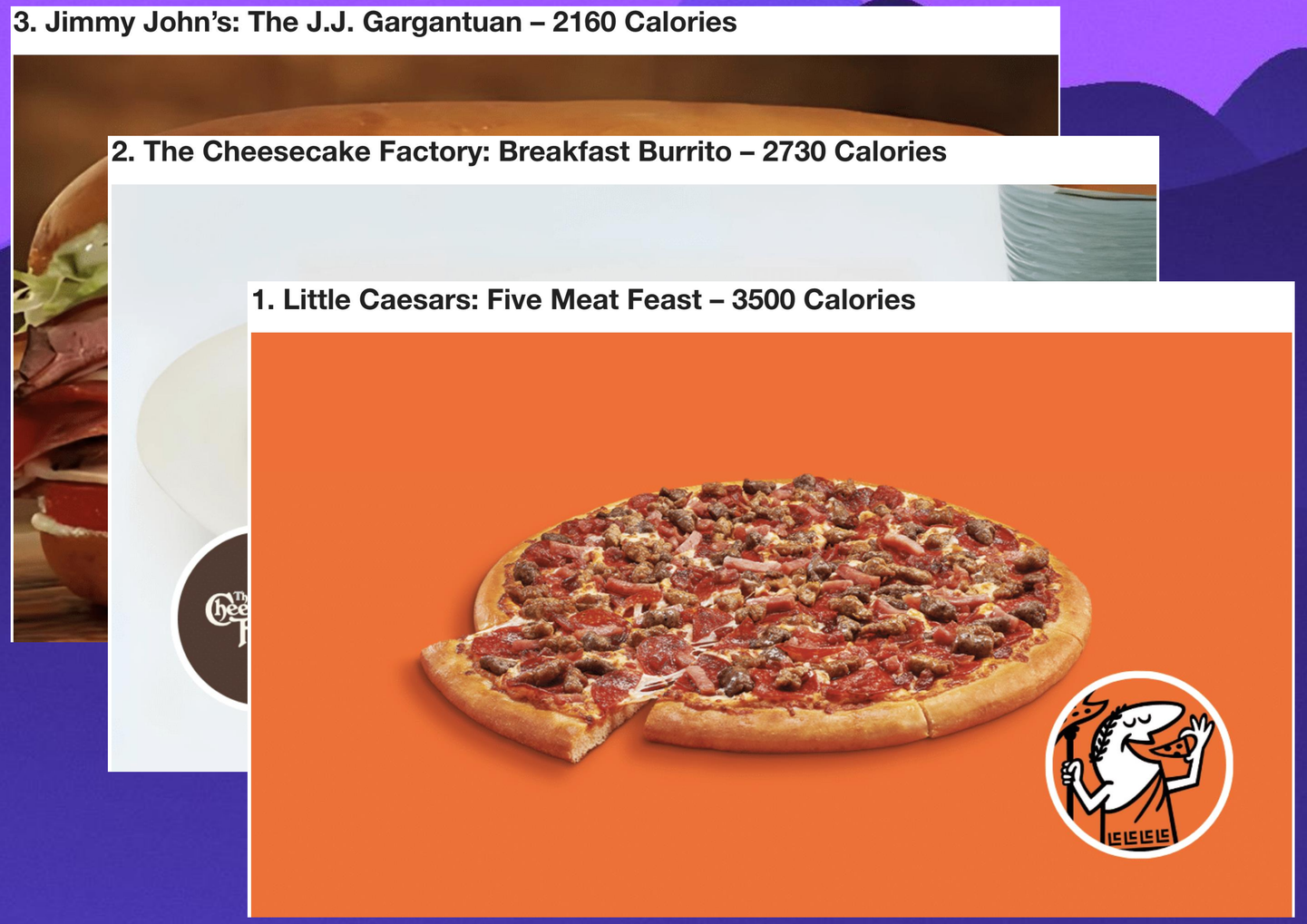
ADD IT UP
Find ways to move more throughout your daily routine, whether it's at work, on your commute or at home. Every active minute counts toward your goal.

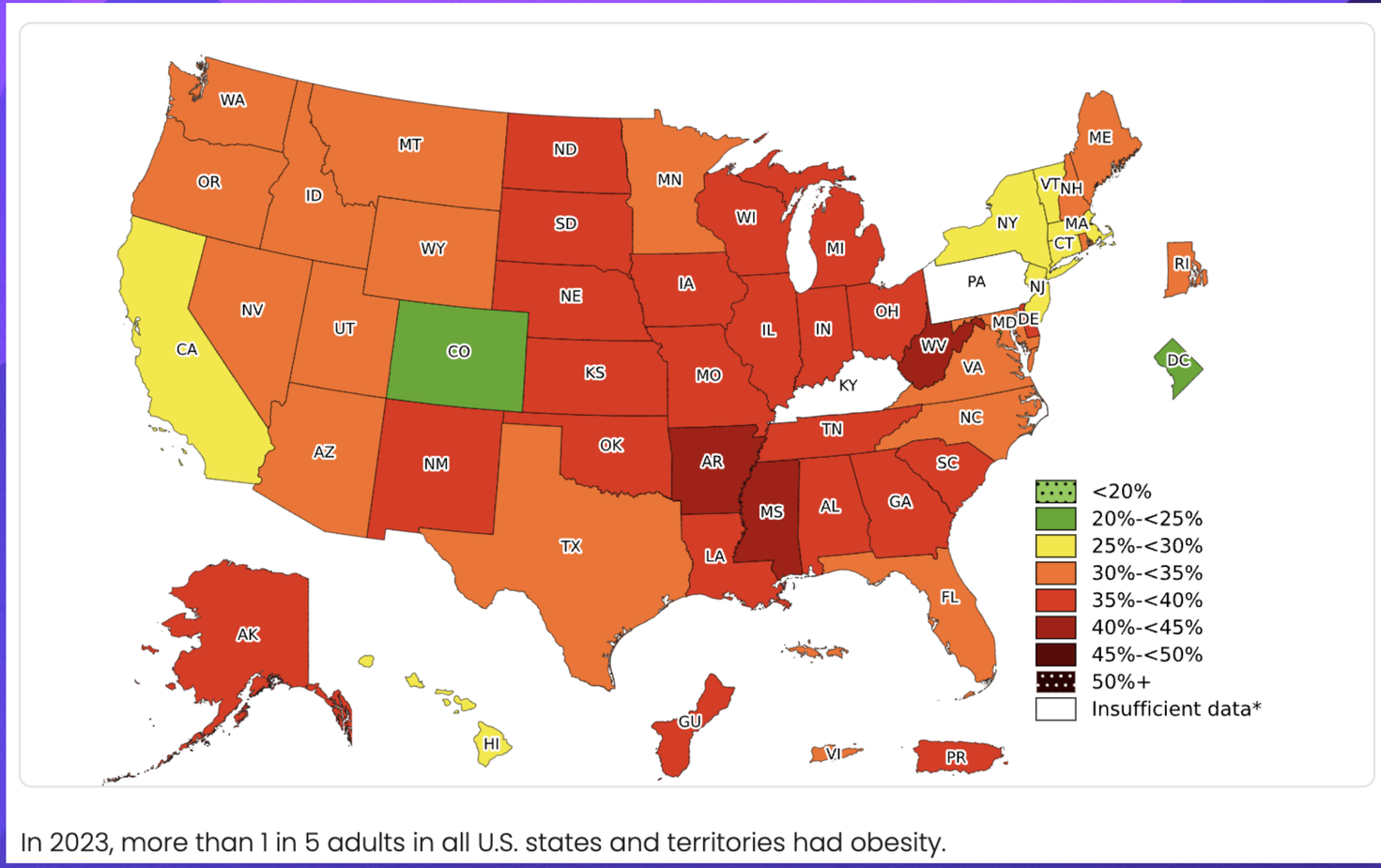
MAKE A HABIT
Do something active every day at about the same time so it becomes a regular habit. Put it on your schedule so you're less likely to miss a day.

Manage Weight

Modifiable metric

- Monitor calories in
- Monitor calories out
- Calculate your BMI
  - Based on height and weight
- Increase activity (Move More!)





In 2023, more than 1 in 5 adults in all U.S. states and territories had obesity.

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HOW TO MANAGE WEIGHT

KEEP TRACK

Understanding how many calories you take in and your activity level can help you identify changes you want to make. To lose weight, you need to burn more calories than you eat.

REDUCE CALORIES IN:

Keeping track of what and how much you're eating can help you know whether you're eating out of habit, stress or boredom instead of real hunger.

INCREASE CALORIES OUT:

An activity tracker can help you gauge how much physical activity you get.

LEARN YOUR BMI

Body Mass Index (BMI) is a numerical value of your weight in relation to your height. It can help you know whether you're at a healthy weight or need to lose weight. Optimal BMI is 25. You can calculate your BMI online or see your health care professional.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

CONTROL PORTIONS

Learn about portion sizes and how much you might really be eating.

GET ACTIVE

Sit less, move more and add intensity to burn more calories and improve your overall health.

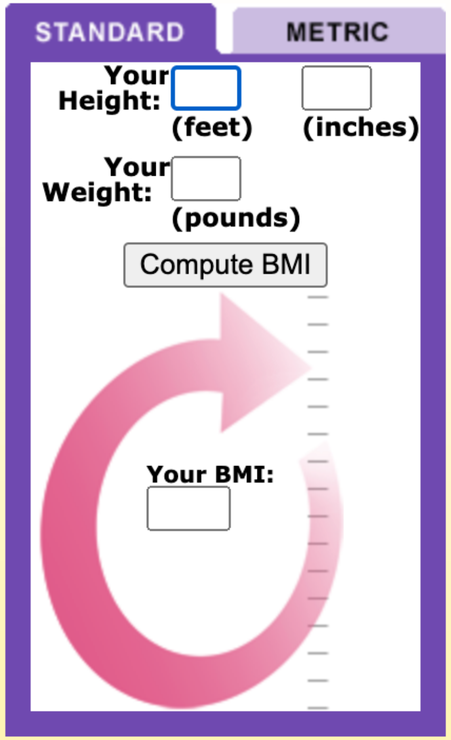
EAT SMART

Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins like fish and seafood.

Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.

GET HELP

If you aren't able to lose weight successfully on your own, talk with your health care professional.



BMI Categories:
Underweight = <18.5
Normal weight = 18.5–24.9
Overweight = 25–29.9
Obesity = BMI of 30 or greater

What Next? Take Action Towards Better Health:

Maintain a Healthy Weight

- Maintaining a healthy weight is important for your heart health.
- Learn more about overweight and obesity

Increase Physical Activity

- Moving more can lower your risk factors for heart disease.

Eat a Heart-Healthy Diet

- Eating a healthy diet is the key to heart disease prevention.

Know and Control Your Heart Health Numbers

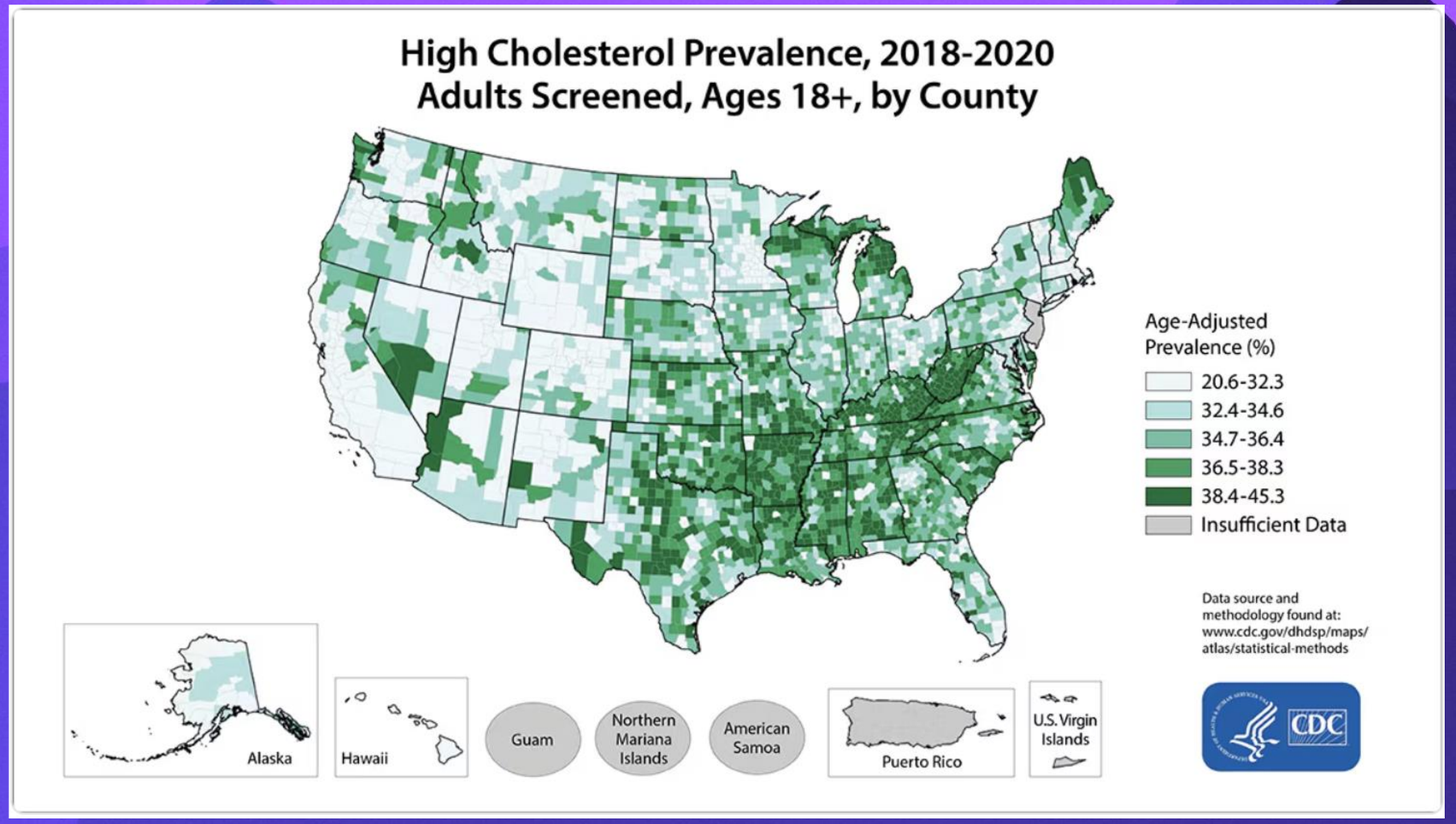
- Tracking your heart health stats can help you meet your heart health goals.

Download the BMI calculator app today (available for iPhone and Android).

Control Cholesterol

Modifiable metric

- Fat that is eaten
- Total
- Triglyceride
- HDL
- LDL
  - TOT = HDL+LDL+1/5TRI


High Cholesterol Prevalence, 2018-2020
Adults Screened, Ages 18+, by County
Age-Adjusted Prevalence (%)
20.6-32.3
32.4-34.6
34.7-36.4
36.5-38.3
38.4-45.3
Insufficient Data
Data source and methodology found at: www.cdc.gov/dhdsp/maps/atlas/statistical-methods
Alaska
Hawaii
Guam
Northern Mariana Islands
American Samoa
Puerto Rico
U.S. Virgin Islands
CDC

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HOW TO CONTROL CHOLESTEROL

UNDERSTAND CHOLESTEROL

Cholesterol is a fat-like substance that comes from two sources: FOOD and your BODY.

It is found in foods from animal sources only. It travels in the body by lipoproteins (LDL and HDL).

HDL = GOOD

High-density lipoprotein is known as **"good" cholesterol.**

LDL = BAD

Low-density lipoprotein is known as **"bad" cholesterol.**

HDL helps keep LDL from sticking to artery walls and reduces plaque buildup. This process can lower the risk of heart disease and stroke.

heart.org/cholesterol

TRIGLYCERIDES

The most common type of fat in the body.

TOTAL CHOLESTEROL

HDL level + LDL level + 1/5th of triglyceride level = **total cholesterol level.**

TRACK LEVELS

A health care professional can measure your blood cholesterol and help you understand what the levels mean in context of your overall heart health..

Track your cholesterol levels over time and take steps to reduce high cholesterol.

Check your heart disease risk with the Check. Change. Control. Calculator.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

EAT SMART

Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins like fish and seafood.

Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.

MOVE MORE

Physical activity helps improve cholesterol levels.

KNOW YOUR FATS

The fats you eat can affect your cholesterol levels. Replace saturated fats with unsaturated fats.

NO NICOTINE

Smoking lowers good HDL cholesterol. It also raises your risk of heart disease.

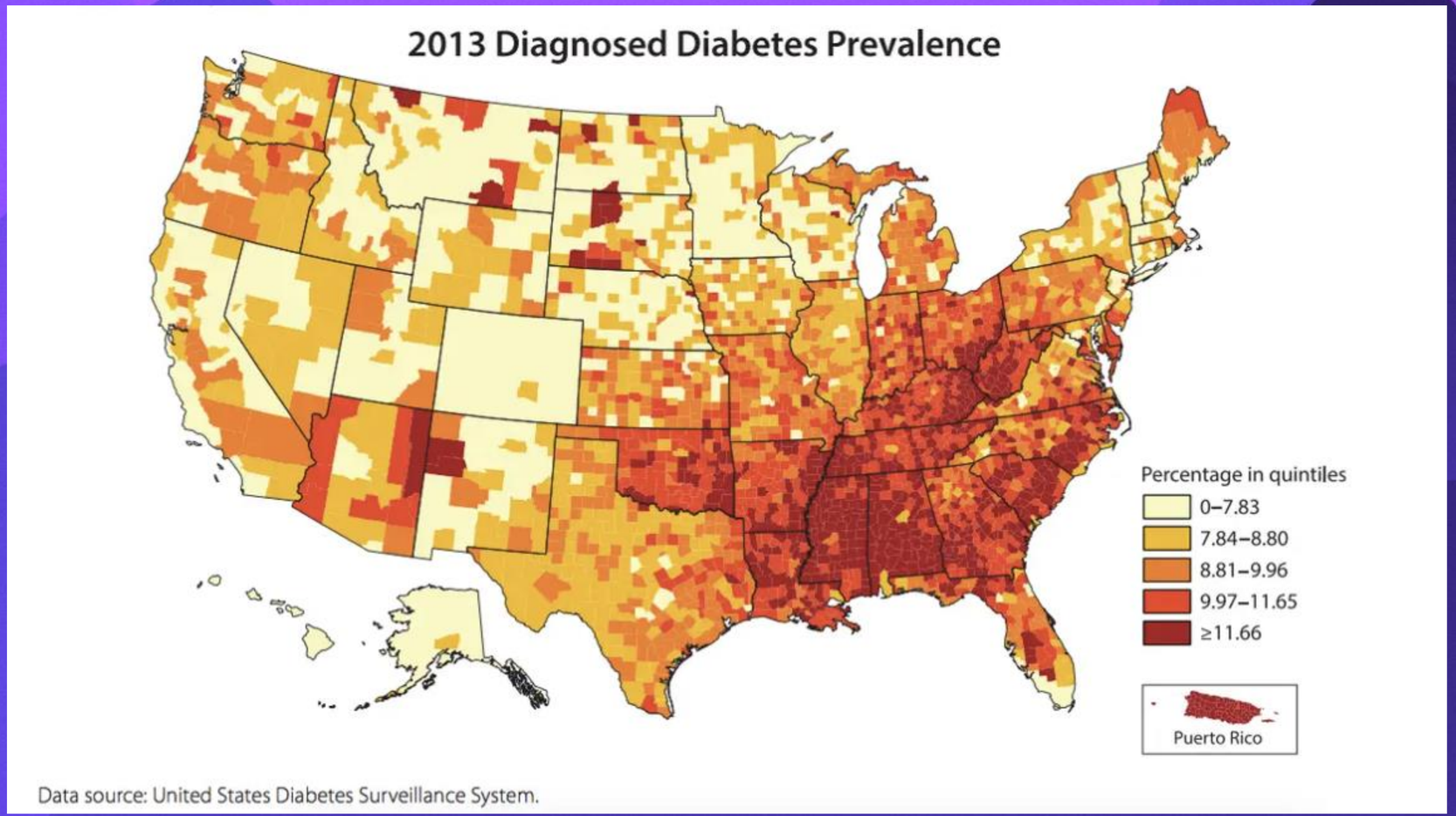
TAKE MEDICATION AS DIRECTED

Your health care professional may prescribe statins or other medications to control your cholesterol levels.

Monitor Glucose

Modifiable metric

- Glucose from foods eaten (with high sugar) as well as carbohydrates
- Assessment of levels with TCM
- Measured levels less than 100 mg/dl is goal
- 100-125 mg/dl is preDM
- Greater than 126 g/dl is where risks are greatest


2013 Diagnosed Diabetes Prevalence
Percentage in quintiles
0–7.83
7.84–8.80
8.81–9.96
9.97–11.65
≥11.66
Puerto Rico
Data source: United States Diabetes Surveillance System.

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HOW TO MANAGE BLOOD SUGAR

UNDERSTAND BLOOD GLUCOSE

The first step to managing your blood sugar is to understand what makes blood sugar levels rise

GLUCOSE
INSULIN

The carbohydrates and sugars in what you eat and drink turns into glucose (sugar) in the stomach and digestive system. Glucose can then enter the bloodstream.

Insulin is a hormone made in the pancreas that helps the body's cells take up glucose from blood and lower blood sugar levels.

In Type 2 diabetes, glucose builds up in the blood instead of going into cells because:

The body develops "insulin resistance" and can't use the insulin it makes efficiently.

The pancreas gradually loses its ability to produce insulin.

The result can be a high blood glucose level.

TRACK LEVELS

Health care professionals can take blood glucose readings and provide recommendations. If you're diagnosed with Type 2 diabetes, you will need to monitor your blood sugar level regularly.

Visit KnowDiabetesbyHeart.org to learn how to manage your risk for heart disease and stroke if you have diabetes.

Fasting Blood Glucose	Diagnosis	What It Means
Lower than 100 mg/dl	Normal	Healthy range
100 to 125 mg/dl	Prediabetes (impaired fasting glucose)	At increased risk of developing diabetes.
126 mg/dl or higher	Diabetes Mellitus (Type 2 diabetes)	At increased risk of heart disease or stroke.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

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Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins like fish and seafood.

Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.

MOVE MORE

Being physically active can lower your risk of developing diabetes and help you manage the disease if you already have it.

MANAGE WEIGHT

Stay at a healthy weight to help prevent, delay or manage diabetes

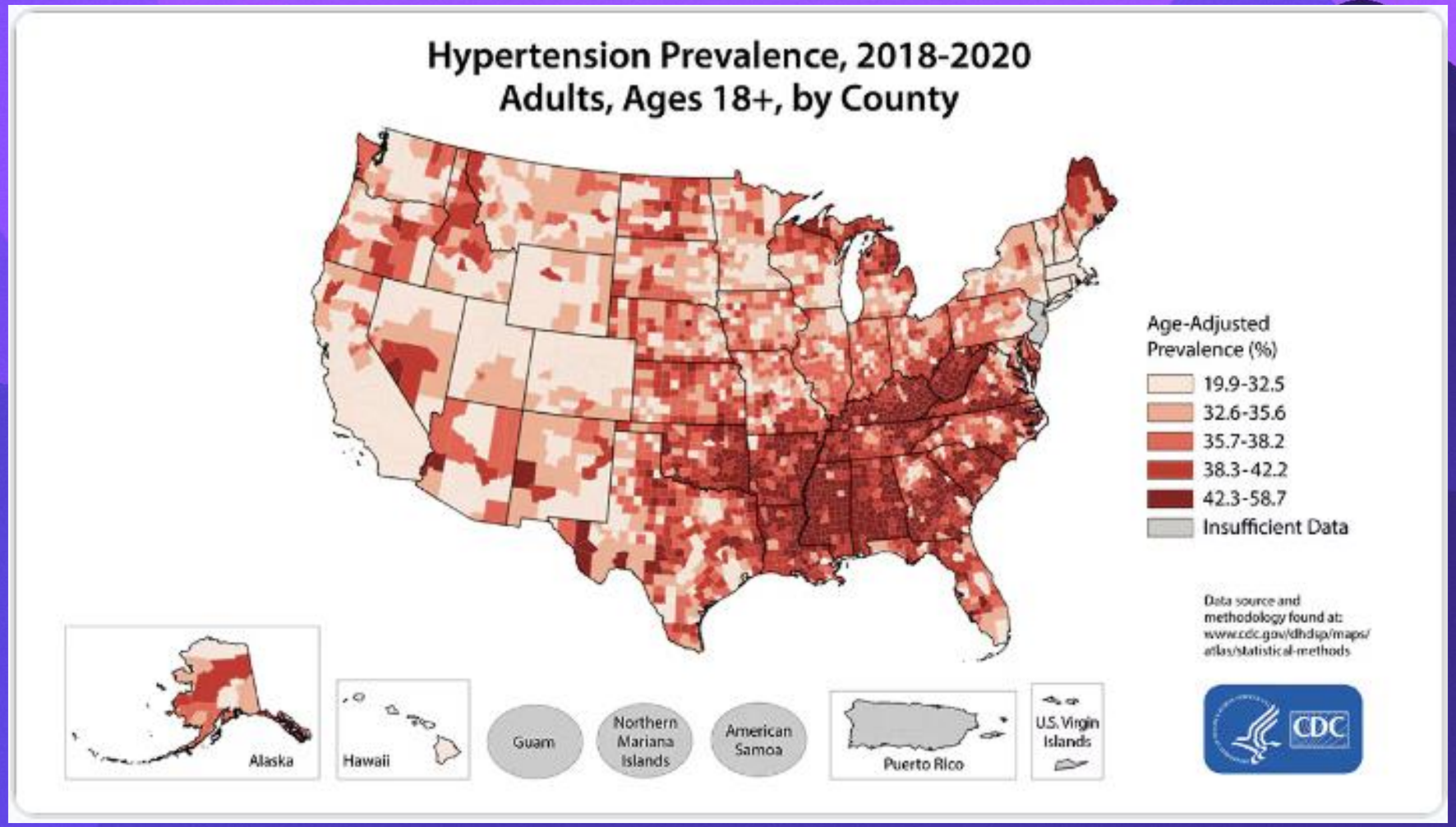
NO NICOTINE

Smoking, vaping, exposure to secondhand smoke or using tobacco can increase your risk of heart disease, stroke, many cancers and other chronic diseases. It may also make prediabetes and diabetes harder to manage.

Track blood pressure

Modifiable metric

- Systolic (top number)
- Diastolic (bottom number)
- Goal: <120/<80 mm Hg
- Stage I: 130-139/80-89 mm Hg
- Stage II: >140/>90 mm Hg
- Get a cuff (arm>>wrist)


Hypertension Prevalence, 2018-2020
Adults, Ages 18+, by County
Age-Adjusted Prevalence (%)
19.9-32.5
32.6-35.6
35.7-38.2
38.3-42.2
42.3-58.7
Insufficient Data
Data source and methodology found at: www.cdc.gov/dhdsp/maps/atlas/statistical-methods
Alaska
Hawaii
Guam
Northern Mariana Islands
American Samoa
Puerto Rico
U.S. Virgin Islands
CDC

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HOW TO MANAGE BLOOD PRESSURE

UNDERSTAND READINGS

Make smart choices and swaps to build an overall healthy eating style. Watch calories and eat smaller portions.

Blood pressure is typically recorded as two numbers, written as a ratio like this:

117
76

Read as "117 over 76" millimeters of mercury.

SYSTOLIC
The top number, the higher of the two numbers, measures the pressure in the arteries when the heart beats (when the heart muscle contracts).

DIASTOLIC
The bottom number, the lower of the two numbers, measures the pressure in the arteries when the heart is resting between heart beats.

BLOOD PRESSURE CATEGORY	SYSTOLIC MM HG (UPPER #)		DIASTOLIC MM HG (LOWER #)
Normal	Lower than 120	*and*	Lower than 80
Elevated Blood Pressure	120 –129	*and*	80
High Blood Pressure (Hypertension) Stage 1	130 –139	*or*	80 –89
High Blood Pressure (Hypertension) Stage 2	140 or higher	*or*	90 or higher
Hypertensive Crisis (Consult your doctor immediately)	Higher than 180	*and/ or*	Higher than 120

TRACK LEVELS

A diagnosis of high blood pressure must be confirmed with a health care professional. Any unusually low blood pressure readings should also be evaluated.

Health care professionals can take blood pressure readings and provide recommendations.

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

EAT SMART

Eat a healthy diet of vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins like fish and seafood.

Limit sugary foods and drinks, red or processed meats, salty foods, refined carbohydrates and highly processed foods.

MOVE MORE

Physical activity helps control blood pressure, weight and stress levels.

MANAGE WEIGHT

If you're overweight, even a slight weight loss can reduce high blood pressure.

NO NICOTINE

Every time you smoke, vape or use tobacco, the nicotine can cause a temporary increase in blood pressure.

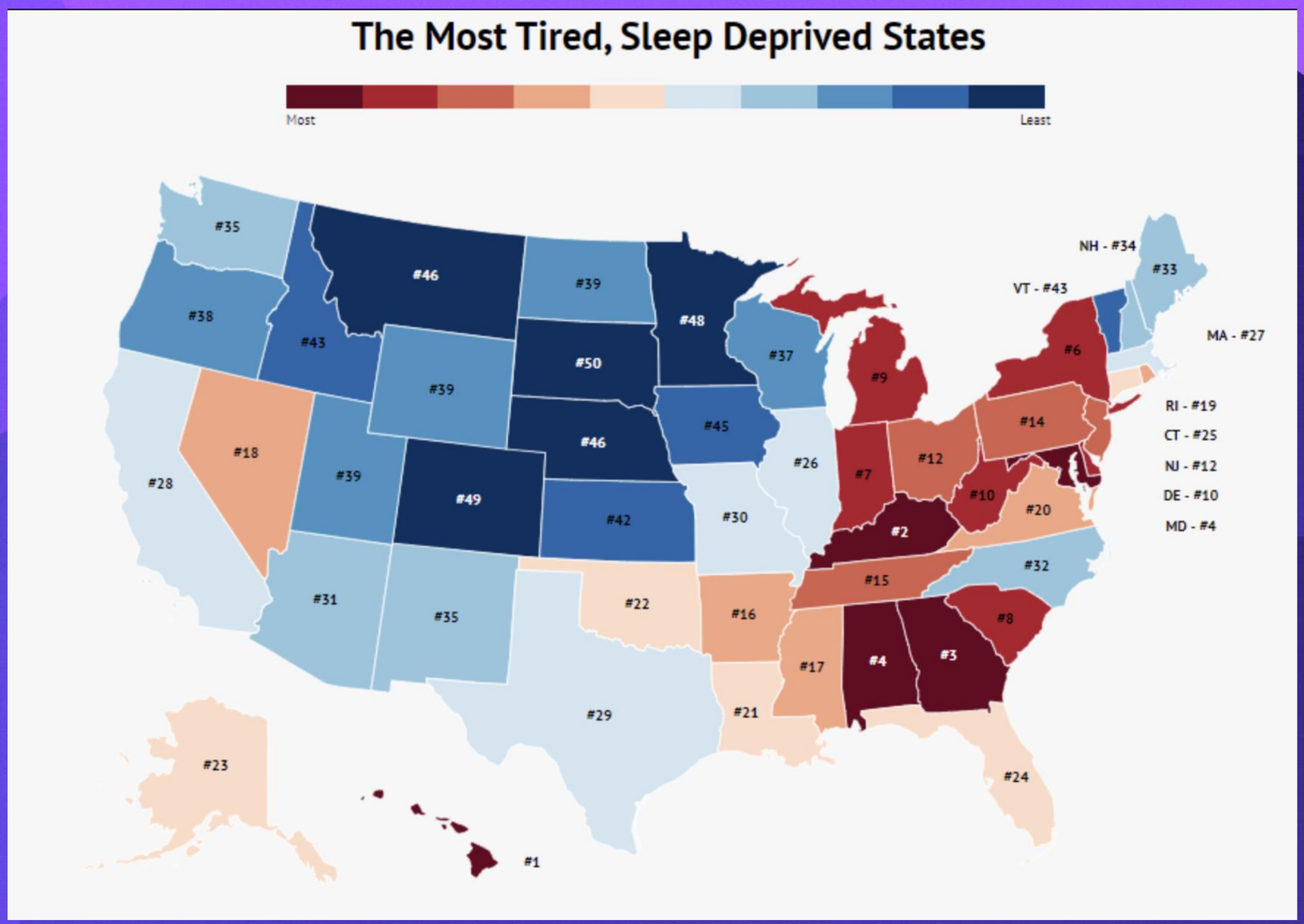
SLEEP WELL

Short sleep (less than 7 hours) and poor-quality sleep are associated with high blood pressure.

Good Sleep

7-9 hours are recommended for adults

The Most Tired, Sleep Deprived States



American Heart Association.
Healthy for Good™

Life's Essential 8™

HOW TO GET HEALTHY SLEEP

Getting a good night's sleep every night is vital to cardiovascular health. Adults should aim for an average of 7-9 hours, and babies and kids need more depending on their age. Too little or too much sleep is associated with heart disease, studies show.

LEARN HOW SLEEP AFFECTS YOUR HEALTH

Most adults need 7 to 9 hours of sleep each night. Babies and kids need even more. ***Poor sleep may put you at higher risk for:***

- Cardiovascular disease
- Cognitive decline and dementia
- Depression
- High blood pressure, blood sugar and cholesterol
- Obesity

LEARN THE BENEFITS OF SLEEP

- **HEALING** and repair of cells, tissues and blood vessels
- **STRONGER** immune system
- **IMPROVED** mood and energy
- **BETTER BRAIN FUNCTION** including alertness, decision-making, focus, learning, memory, reasoning and problem-solving
- **LESS RISK** of chronic disease

Learn more at heart.org/lifes8

TIPS FOR SUCCESS

Clean up your sleep hygiene

MOVE IT.

Charge your device as far away from your bed as possible. Added bonus? The distance may help you feel less overwhelmed in general.

DIM IT.

Dim your screen or use a red filter app at night. The bright blue light of most devices can mess with your circadian rhythm and melatonin production.

SET IT.

Alarms aren't just for waking up – set a bedtime alarm to remind you that it's time to wrap it up for the night.

LOCK IT.

If you've got a scrolling habit you need to kick, try an app-blocking app that makes it impossible to get lost in after-hours emails, social media or gaming.

BLOCK IT.

Tell notifications to buzz off if they're waking you up at night. Put your phone on "do not disturb" mode to block it all out when you're trying to sleep.

MY LIFE CHECK ASSESSMENT

WELCOME

Update your Heart Health Score

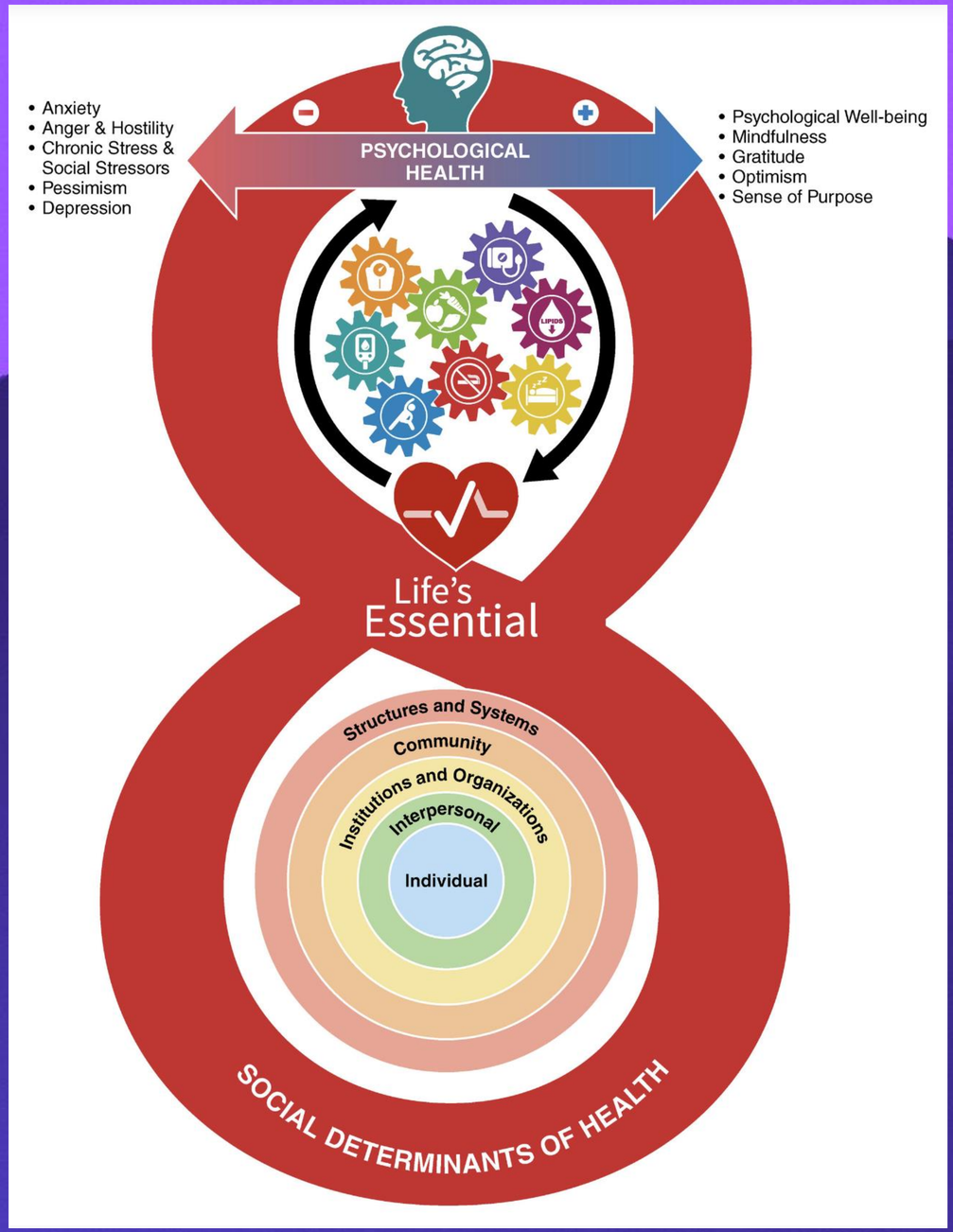
Make sure your Heart Health Score is current to most accurately reflect your health.

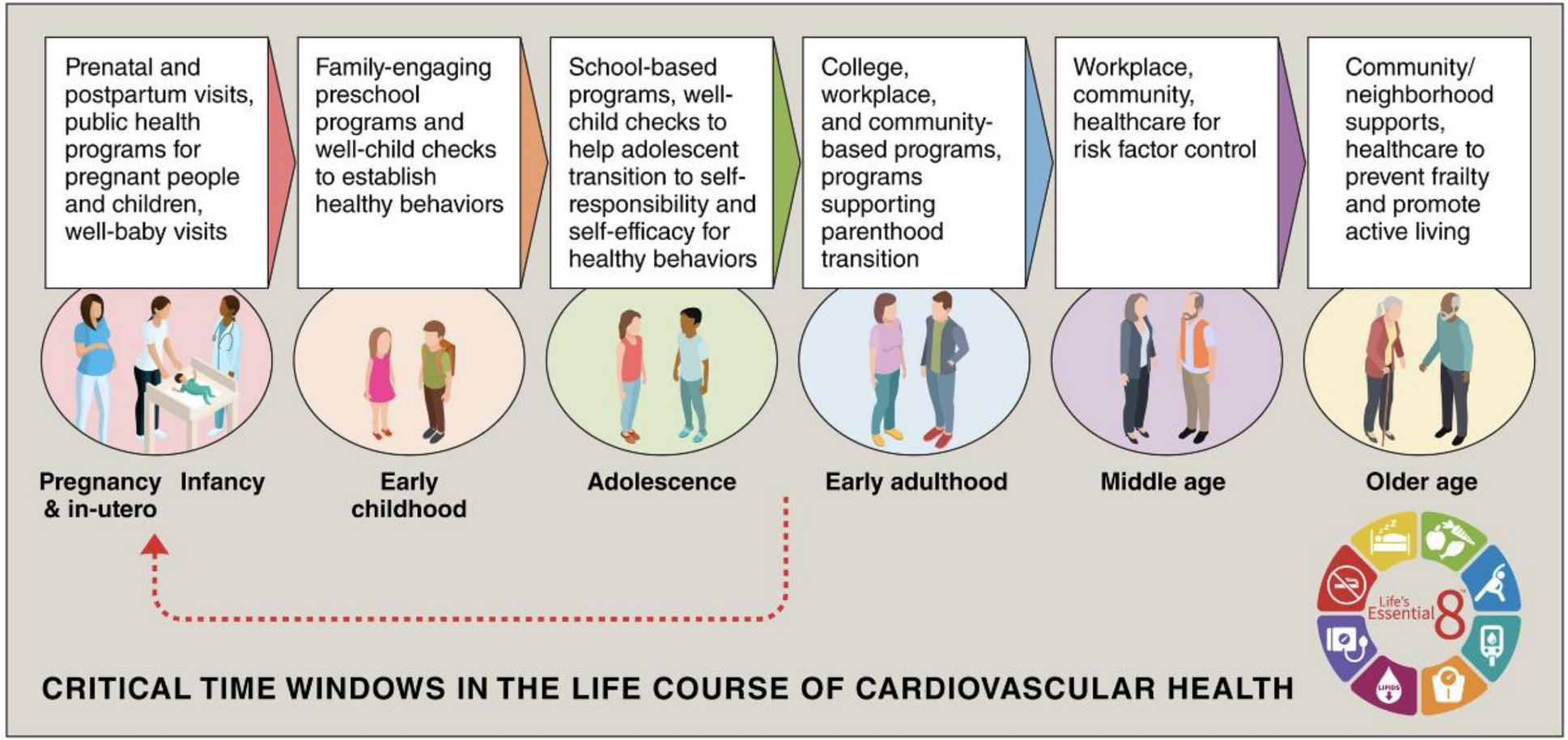
PROFILE	✓ Completed on 1/18/2023	>
HEALTH BEHAVIORS	✓ Completed on 1/18/2023	>
HEALTH FACTORS	✓ Completed on 1/18/2023	>
WELL-BEING	✓ Completed on 1/18/2023	>
YOUR HEART HEALTH SCORE	✓ Completed on 1/18/2023	>

- Strong inverse association between the number of CVH metrics/score, and CVD/CVD mortality
- Patients with high genetic risk have up to a 50% lower risk for coronary events with high CVH scores
- It is never too late to gain benefits, but the sooner CVH is optimized, the better the outcomes
- Better CVH is associated with lower risk of cancer, kidney disease, and dementia
- Better CVH is associated with longer life span and lower heath care costs

- People are not inheriting CVH meaning that behavior and environment play the key role
- The younger you are with the adoption of healthy lifestyle choices, the better you are suited for middle and later life
- Heavy weight of psychological, social, and structural determinants on CVH
- Assessment of CVH score is an easy, reproducible manner to monitor individuals and the public with the end goal being primordial prevention and life extension

- Over the last ten years, there has been an evolution with psychological health as well as social determinants of health (SDOH)




Prenatal and postpartum visits, public health programs for pregnant people and children, well-baby visits
Family-engaging preschool programs and well-child checks to establish healthy behaviors
School-based programs, well-child checks to help adolescent transition to self-responsibility and self-efficacy for healthy behaviors
College, workplace, and community-based programs, programs supporting parenthood transition
Workplace, community, healthcare for risk factor control
Community/ neighborhood supports, healthcare to prevent frailty and promote active living
Pregnancy & in-utero
Infancy
Early childhood
Adolescence
Early adulthood
Middle age
Older age
Life's Essential 8
CRITICAL TIME WINDOWS IN THE LIFE COURSE OF CARDIOVASCULAR HEALTH

Individual responsibility

Public Health Policies

- Electronic Health Records (EHRs) have been very helpful for assistance with trending labs and a more clear assessment of CV risks, as related to CVH

Bring it all together with My Life Checklist

64.7%

Mean Cardiovascular Health Score for adults in the US

Several risk calculators

How did we do with the initial plan to have 20% reduction in cardiovascular disease?

Twenty-Year Trends in the American Heart Association Cardiovascular Health Score and Impact on Subclinical and Clinical Cardiovascular Disease: The Framingham Offspring Study

Danielle M. Enserro, **Ramachandran S. Vasan** and **Vanessa Xanthakis**

Originally published 17 May 2018 | https://doi.org/10.1161/JAHA.118.008741 | Journal of the American Heart Association. 2018;7:e008741

Abstract

Background

Data on the temporal trends in ideal cardiovascular health (CVH) as well as on their association with subclinical/overt cardiovascular disease (CVD) and death are limited.

Methods and Results

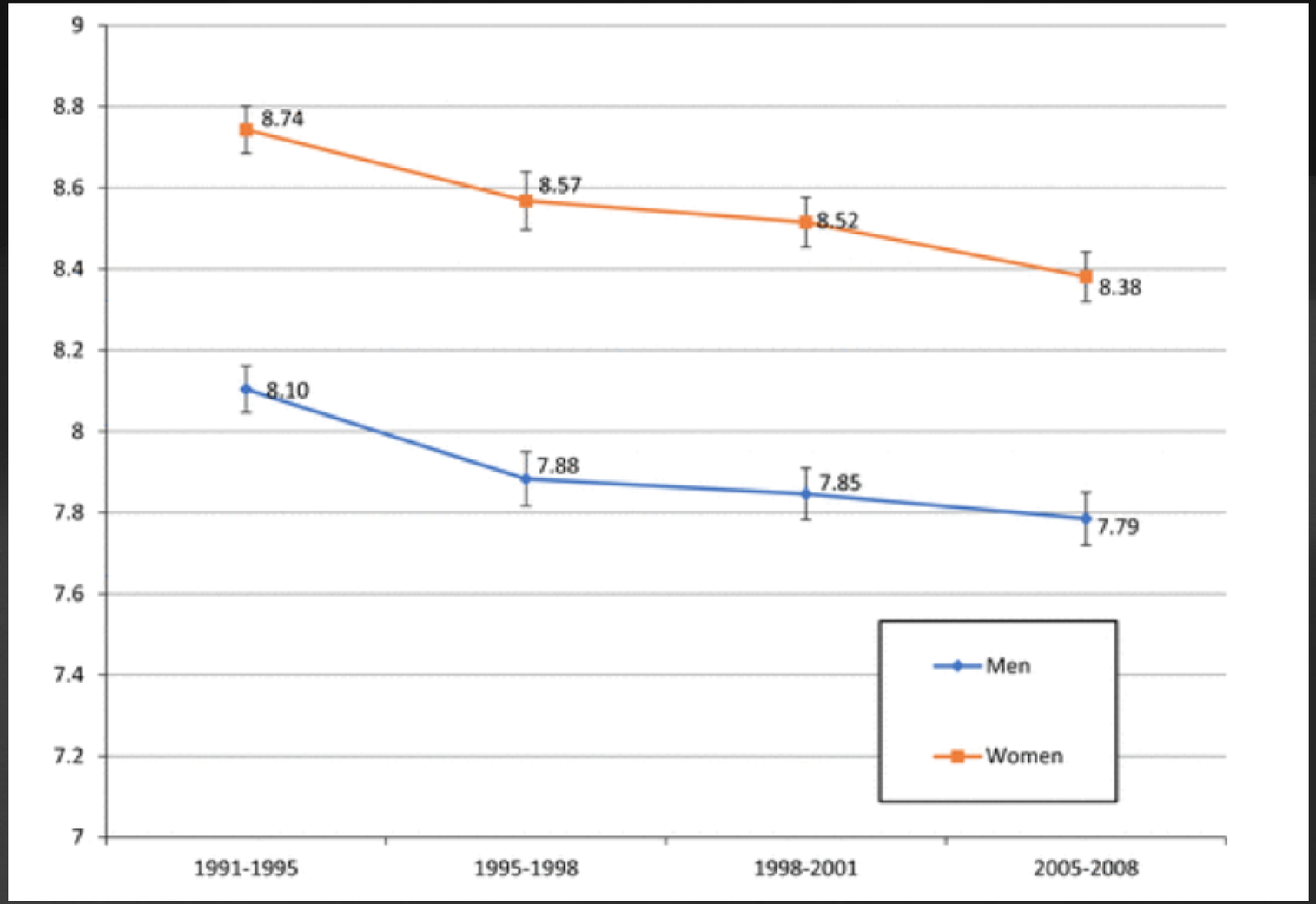
This study included 3460 participants attending ≥1 of 4 consecutive exams of the Framingham Heart Study (1991–2008, mean age 55.4 years, CVH score ranged 0–14). We created 4 groups describing changes in CVH score between examination cycles 5 and 8, using first and last exams attended (high-high:

Summary

(It’s not great)

- The number of patients with “ideal cardiovascular health” has decreased over the past 20 years
- If you were able to achieve high scores, your risk of subclinical and incident cardiovascular disease and all cause mortality is less

CVH score, %		
0 points	0.0	0.0
1 point	0.0	0.1
2 points	0.2	0.2
3 points	1.2	1.0
4 points	2.5	2.9
5 points	5.3	6.5
6 points	8.5	11.4
7 points	13.3	15.7
8 points	14.8	21.1
9 points	16.8	16.9
10 points	15.4	12.2
11 points	10.4	6.8
12 points	7.5	3.7
13 points	3.4	1.4
14 points	0.7	0.1


9
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
7
8.74
8.57
8.52
8.38
8.10
7.88
7.85
7.79
Men
Women
1991-1995
1995-1998
1998-2001
2005-2008

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Heart Disease and Stroke Statistics—2017 Update

A Report From the American Heart Association

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- The AHA developed a Health Campaign for Life's Simple 7, which emphasizes that adults and young people can live healthier lives by avoiding smoking and tobacco products, engaging in daily PA, eating a healthy diet, maintaining a healthy weight, and keeping cholesterol, BP, and glucose at healthy levels. New highlights from the cardiovascular health section include the following:
- A recent meta-analysis of 9 prospective cohort studies involving 12 878 participants contributed new estimates of the importance of cardiovascular health metrics and risk for clinical events. The meta-analysis showed that achieving the greatest ideal cardiovascular health metrics was associated with a lower risk of stroke (relative risk, 0.31; 95% confidence interval [CI], 0.25–0.38), CVD (relative risk, 0.20; 95% CI, 0.11–0.37), cardiovascular mortality (relative risk, 0.25; 95% CI, 0.10–0.63), and all-cause mortality (relative risk, 0.55; 95% CI, 0.37–0.80).
- The health benefits of pursuing cardiovascular health are observed across races/ethnicities and the nation. New data on measures of cardiovascular health in Hispanics find similar results as previous reports in non-Hispanic groups. Studies from non-US populations also support the importance of Life's Simple 7 on future disease prevention.
- Trends in improvements in overall cardiovascular health metrics are projected to reduce coronary heart disease deaths by 30% between 2010 and 2020.
- The current evidence supports a range of complementary life course strategies to improve cardiovascular health in youth and adults as they age. Such approaches focus on both (1) improving cardiovascular health among those who currently have less than optimal levels and (2) preserving cardiovascular health among those who currently have ideal levels. The AHA and the literature support the importance of the following:
- Individual-focused approaches, which target lifestyle and risk factor treatments at the individual level.
- Healthcare systems approaches, which encourage, facilitate, and reward efforts by providers and patients to improve health behaviors and health factors.
- Population approaches, which target lifestyle and treatments in schools, places of worship, work-places, local communities, and states, as well as throughout the nation.

Genetic Factors

- With high polygenic risk and a high LS7 score, there were over 20 year more CHD free period than the low LS7

American Heart Association's Life's Simple 7: Lifestyle Recommendations, Polygenic Risk, and Lifetime Risk of Coronary Heart Disease

Natalie R. Hasbani, Symen Ligthart, Michael R. Brown, Adam S. Heath, Allison Bebo, Kellan E. Ashley, Eric Boerwinkle, Alanna C. Morrison, Aaron R. Folsom, David Aguilar and Paul S. de Vries

Originally published 31 Jan 2022 | https://doi.org/10.1161/CIRCULATIONAHA.121.053730 | Circulation. 2022;145:808–818

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Life's Simple 7: Vital But Not Easy

Eduardo Sanchez

Originally published 17 May 2018 | https://doi.org/10.1161/JAHA.118.009324 | Journal of the American Heart Association. 2018;7:e009324

In this issue of the *Journal of the American Heart Association* (*JAHA*), the study by Enserro et al[1] of 20-year trends in cardiovascular health (CVH) and the impact on subclinical and incident clinical cardiovascular disease (CVD) offers important insight into how CVH changes over time among individuals in a cohort study and the association of those changes with subclinical CVD, clinical CVD, and mortality. CVH is protective is what the study tells us, and the good news is that we have known for a while what it takes to achieve health. Hippocrates is said to have said, "if we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health."[2] Centuries later, Breslow and Breslow identified 7 health habits that, on the basis of a 35-year observational study of 7000 people in

June 5, 2018
Vol 7, Issue 11

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American Heart Association's Life's Simple 7: Lifestyle Recommendations, Polygenic Risk, and Lifetime Risk of Coronary Heart Disease

Natalie R. Hasbani, Symen Ligthart, Michael R. Brown, Adam S. Heath, Allison Bebo, Kellan E. Ashley, Eric Boerwinkle, Alanna C. Morrison, Aaron R. Folsom, David Aguilar and Paul S. de Vries

Originally published 31 Jan 2022 | https://doi.org/10.1161/CIRCULATIONAHA.121.053730 | Circulation. 2022;145:808–818

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March 15, 2022
Vol 145, Issue 11

Abstract

Background:

Understanding the effect of lifestyle and genetic risk on the lifetime risk of coronary heart disease (CHD) is important to improving public health initiatives. Our objective was to quantify remaining lifetime risk and years free of CHD according to polygenic risk and the American Heart Association's Life's Simple 7 (LS7) guidelines in a population-based cohort study.

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Forecasting the Future of Cardiovascular Disease in the United States

A Policy Statement From the American Heart Association

Paul A. Heidenreich, Justin G. Trogdon, Olga A. Khavjou, Javed Butler, Kathleen Dracup, Michael D. Ezekowitz, Eric Andrew Finkelstein, Yuling Hong, S. Claiborne Johnston, Amit Khera, ... See all authors

and on behalf of the American Heart Association Advocacy Coordinating Committee

and Stroke Council

and Council on Cardiovascular Radiology and Intervention

and Council on Clinical Cardiology

and Council on Epidemiology and Prevention

and Council on Arteriosclerosis

and Thrombosis and Vascular Biology

and Council on Cardiopulmonary

and Critical Care

and Perioperative and Resuscitation

and Council on Cardiovascular Nursing

and Council on the Kidney in Cardiovascular Disease

and Council on Cardiovascular Surgery and Anesthesia, and Interdisciplinary Council on Quality of Care and Outcomes Research

Originally published 24 Jan 2011 | https://doi.org/10.1161/CIR.0b013e31820a55f5 | Circulation. 2011;123:933–944

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Vol 123, Issue 8

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Twenty-Year Trends in the American Heart Association Cardiovascular Health Score and Impact on Subclinical and Clinical Cardiovascular Disease: The Framingham Offspring Study

Danielle M. Enserro, Ramachandran S. Vasan and Vanessa Xanthakis

Originally published 17 May 2018 | https://doi.org/10.1161/JAHA.118.008741 | Journal of the American Heart Association. 2018;7:e008741

Jump to

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June 5, 2018
Vol 7, Issue 11

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Heart Disease and Stroke Statistics—2022 Update: A Report From the American Heart Association

Connie W. Tsao, Aaron W. Aday, Zaid I. Almarzooq, Alvaro Alonso, Andrea Z. Beaton, Marcio S. Bittencourt, Amelia K. Boehme, Alfred E. Buxton, April P. Carson, … See all authors

Originally published 26 Jan 2022 | https://doi.org/10.1161/CIR.0000000000001052 | Circulation. 2022;145:e153–e639

is corrected by

Other version(s) of this article

Jump to

Abstract

Background:

The American Heart Association, in conjunction with the National Institutes of Health, annually reports the most up-to-date statistics related to heart disease, stroke, and cardiovascular risk factors, including core health behaviors (smoking, physical activity, diet, and weight) and health factors (cholesterol, blood pressure, and glucose control) that contribute to cardiovascular health. The Statistical Update presents the latest data on a range of major clinical heart and circulatory disease conditions

Details Related References Figures

February 22, 2022
Vol 145, Issue 8

Curr Cardiol Rev. 2010 Feb; 6(1): 54–61.
doi: 10.2174/157340310790231635
PMCID: PMC2845795
PMID: 21286279

Sleep Duration as a Risk Factor for Cardiovascular Disease- a Review of the Recent Literature

Michiaki Nagai,[1,2] Satoshi Hoshide,[1] and Kazuomi Kario[1,*]

Abstract

Go to: ▸

Sleep loss is a common condition in developed countries, with evidence showing that people in Western countries are sleeping on average only 6.8 hour (hr) per night, 1.5 hr less than a century ago. Although the effects of sleep deprivation on our organs have been obscure, recent epidemiological studies have revealed relationships between sleep deprivation and hypertension (HT), coronary heart disease (CHD), and diabetes mellitus (DM). This review article summarizes the literature on these relationships. Because sleep deprivation increases sympathetic nervous system activity, this increased activity serves as a common pathophysiology for HT and DM. Adequate sleep duration may be important for preventing cardiovascular diseases in modern society.

Proc Jpn Acad Ser B Phys Biol Sci. 2010 May 11; 86(5): 484–493.
doi: 10.2183/pjab.86.484
PMCID: PMC3108295
PMID: 20467214

A historical perspective on the discovery of statins

Akira ENDO*1†

Editor: Teruhiko BEPPU

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Abstract

Go to:

Cholesterol is essential for the functioning of all human organs, but it is nevertheless the cause of coronary heart disease. Over the course of nearly a century of investigation, scientists have developed several lines of evidence that establish the causal connection between blood cholesterol, atherosclerosis, and coronary heart disease. Building on that knowledge, scientists and the pharmaceutical industry have successfully developed a remarkably effective class of drugs—the statins—that lower cholesterol levels in blood and reduce the frequency of heart attacks.