

# Cardiovascular Risk Reduction

*The Simple 7 are now the Essential 8*

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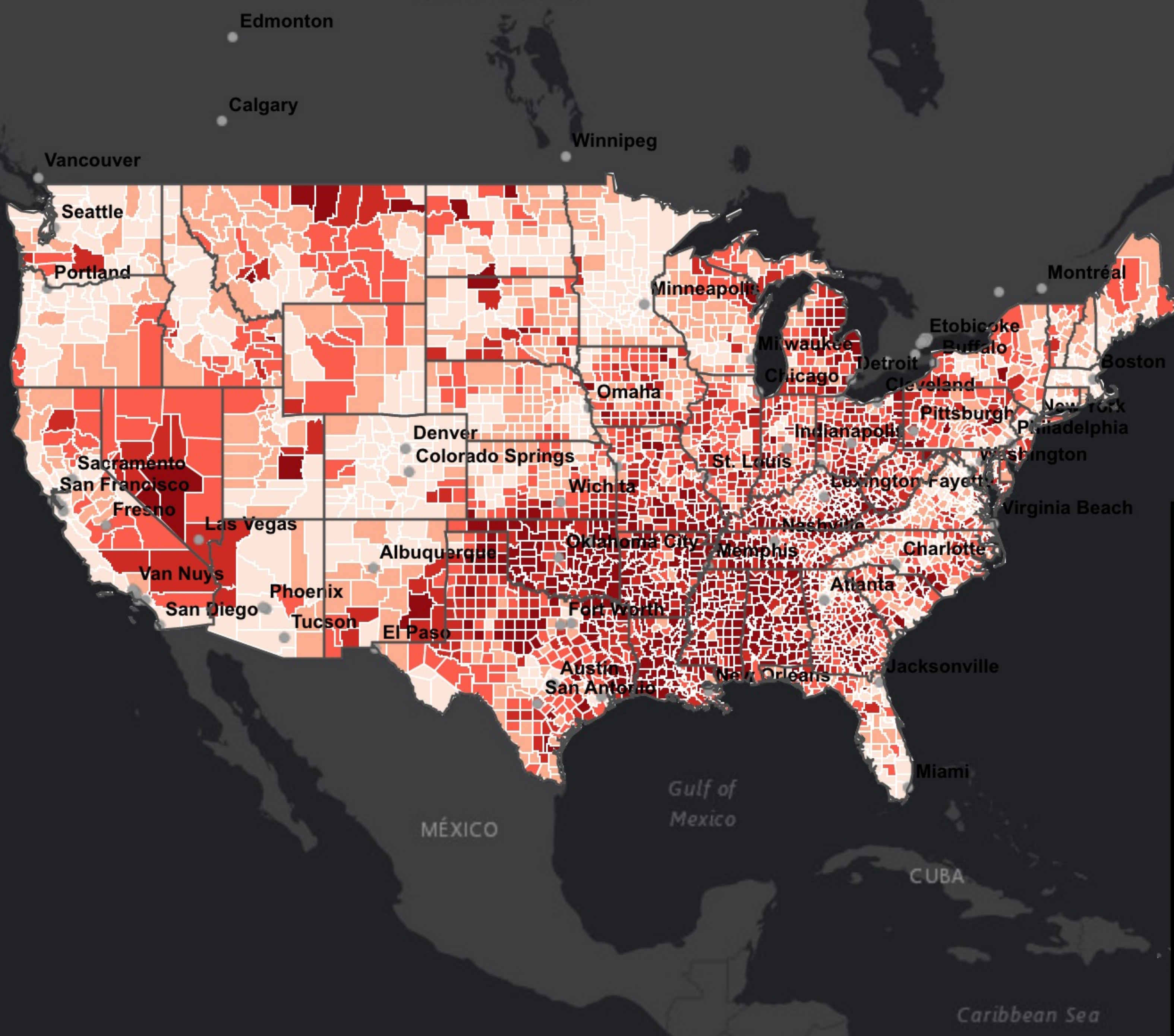


**VERY**



**Cardiovascular Disease is 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 34 seconds, someone dies of a cardiovascular disease related issue
- Nearly 700,000 people died in 2020 from heart disease in the United States



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

# Cardiovascular Disease is costly



**EXCEPTIONALLY**

### 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
<b>TOTAL COSTS</b>	<b>\$555 billion</b>	<b>\$1.1 trillion</b>

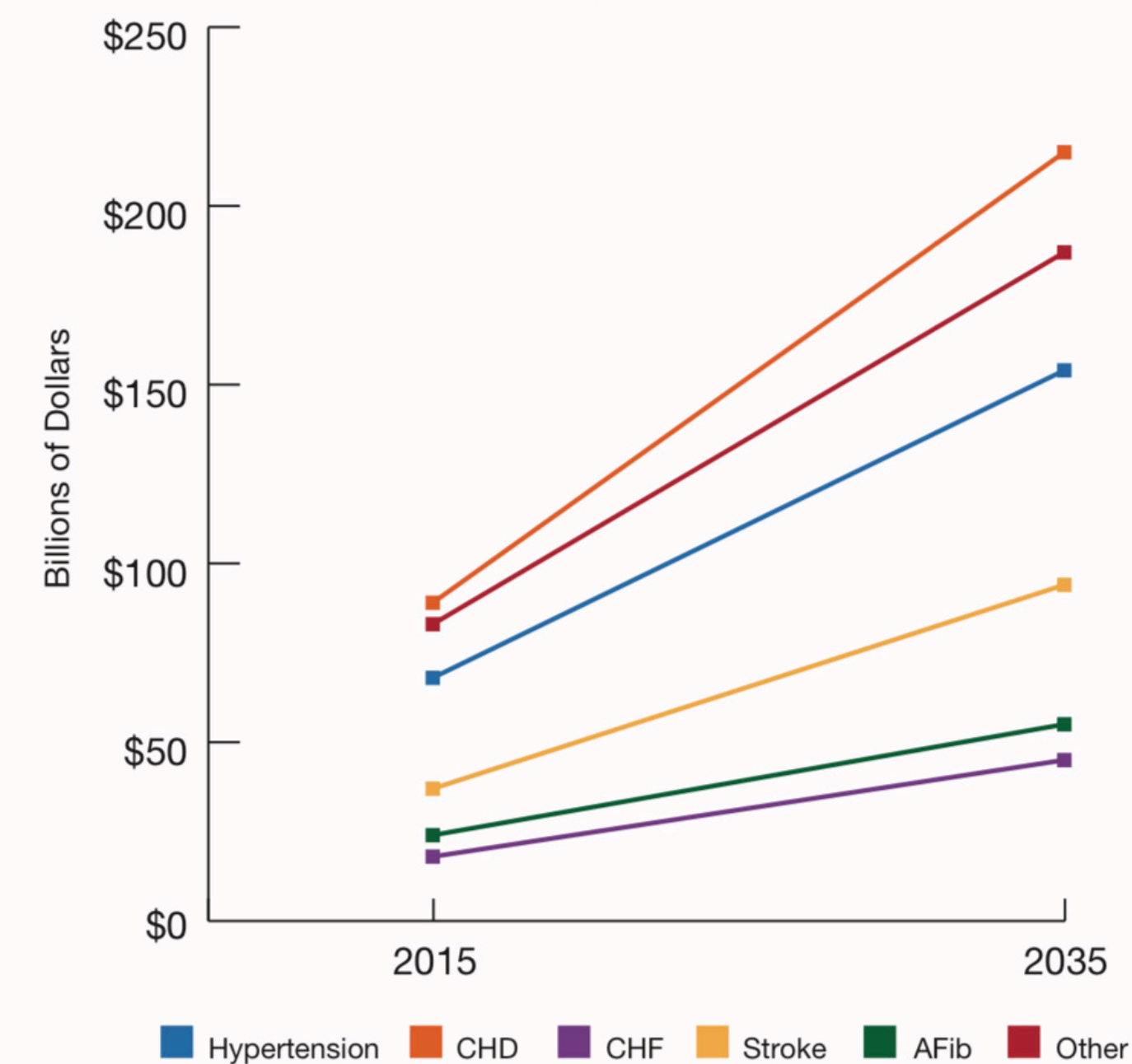
### Projections – CVD Indirect Costs Through 2035

	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
<b>TOTAL COSTS</b>	<b>\$237 billion</b>	<b>\$368 billion</b>

### 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
<b>TOTAL MEDICAL COSTS</b>	<b>\$318 billion</b>	<b>\$749 billion</b>

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



**What are the Simple 7?**

**Four are modifiable**  
**Three are biometric**

# Quit Tobacco

## Modifiable

- Inhaled tobacco products
  - Traditional cigarettes
  - E cigarettes
  - Vaping
- Leading cause of preventable death in the US
- 1/3 of all CV deaths



He's one of the busiest men in town. While his door may say *Office Hours 2 to 4*, he's actually on call 24 hours a day.

The doctor is a scientist, a diplomat, and a friendly sympathetic human being all in one, no matter how long and hard his schedule.

According to a recent Nationwide survey:

## MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE

DOCTORS in every branch of medicine—113,597 in all—were queried in this nationwide study of cigarette preference. Three leading research organizations made the survey. The gist of the query was—What cigarette do you smoke, Doctor?

*The brand named must was Camel!*

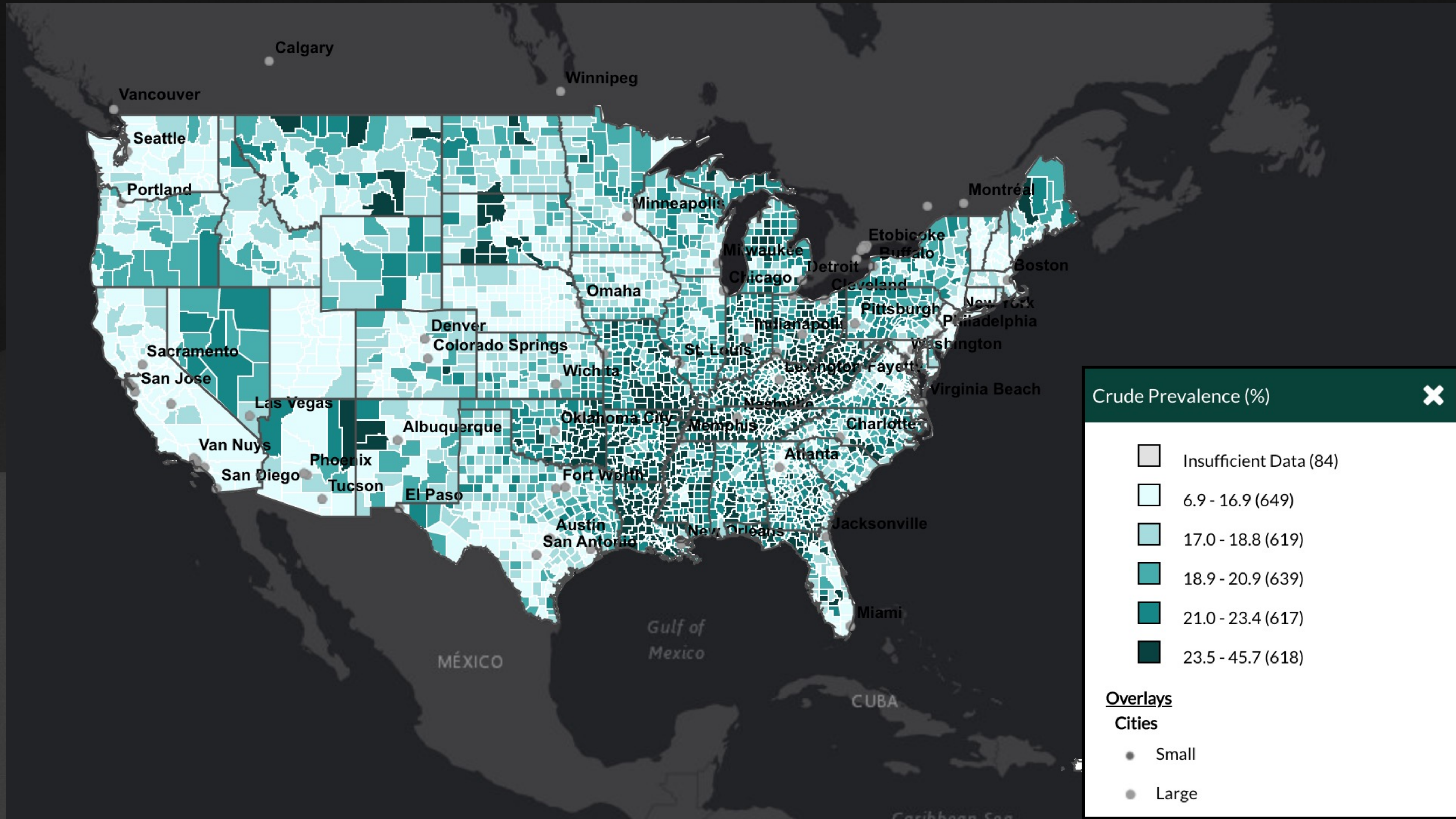
The rich, full flavor and cool mildness of Camel's superb blend of costlier tobaccos seem to have the same appeal to the smoking tastes of doctors as to millions of other smokers. If you see a Camel smoker, this preference among doctors will hardly surprise you. If you're not—well, try Camels now.

Your "T-Zone" Will Tell You...

**T for Taste . . .**  
**T for Throat . . .**

that's your proving ground for any cigarette. See if Camels don't suit your "T-Zone" to a "T."

**CAMELS** Costlier Tobaccos



## 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](https://www.heart.org/lifes8)

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### **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](https://www.heart.org/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



## 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

Nutrition Facts	
8 servings per container	
Serving size 2/3 cup (55g)	
Amount per serving	
<b>Calories 230</b>	
<small>% Daily Value*</small>	
Total Fat 8g	16%
Saturated Fat 1g	2%
Trans Fat 0g	

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](https://heart.org/lifes8)

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### 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



## 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](https://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!)



## 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.



### **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.

Learn more at [heart.org/lifes8](https://heart.org/lifes8)

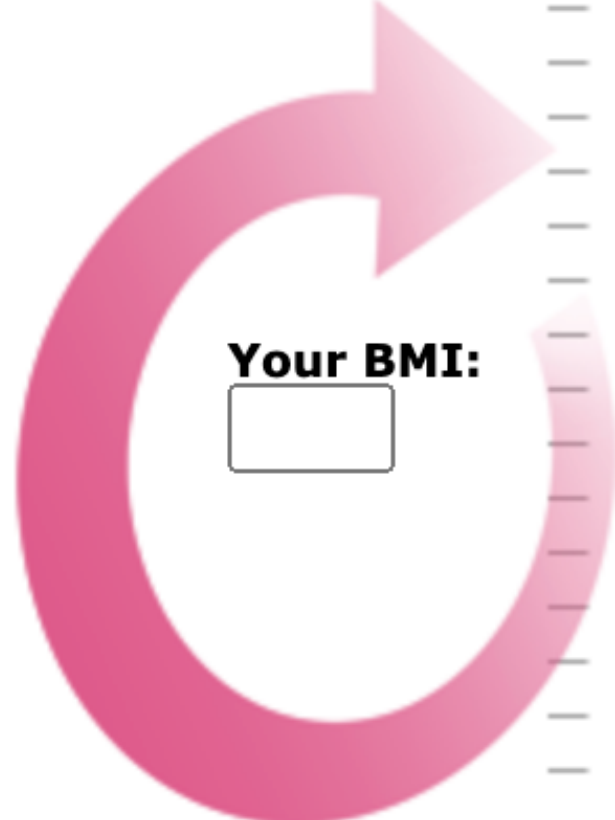
**STANDARD**    **METRIC**

Your Height:  (feet)     (inches)

Your Weight:  (pounds)

Compute BMI

Your BMI:



**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 or made
- Total
- Triglyceride
- HDL
- LDL
  - $TOT = HDL + LDL + 1/5 TRI$





## 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](https://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](https://heart.org/lifes8)

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### **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
- Less than 100 mg/dl is goal
- 100-125 mg/dl is preDM
- Greater than 126 mg/dl is where risks are greatest



# 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](https://www.heart.org/knownotes) 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](https://www.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

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  $\gg$  wrist)




## 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** **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).

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

Read as "117 over 76" millimeters of mercury.

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.

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### 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.

So we have these 7 metrics...

	Level of Health for Each Metric		
	Poor	Intermediate	Ideal
Current smoking	Yes	Former ≤ 12 months	Never or quit >12 months Never tried; never smoked whole cigarette
BMI*	≥30 kg/m <sup>2</sup>	25-29.9 kg/m <sup>2</sup>	18.5-25 kg/m <sup>2</sup>
PA†	None	1-149 min/week moderate or 1-74 min/wk vigorous 1-149 min/wk moderate + 2x vigorous >0 min <60 min of moderate or vigorous every day	≥150 min/wk moderate or ≥75 min/wk vigorous ≥150 min/wk moderate + 2x vigorous ≥60 of moderate or vigorous every day
Healthy diet pattern, number of components ‡	0-1	2-3	4-5
Total cholesterol	≥240 mg/dL	200-239 mg/dL or treated to goal	<200 mg/dL
Blood pressure	SBP ≥140 mmHg or DBP ≥90 mmHg	SBP 120-139 mmHg or DBP 80-89 mmHg or treated to goal	<120 mmHg/ <80 mmHg
Fasting plasma glucose	≥126 mg/dL	100-125 mg/dL	<100 mg/dL

**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.

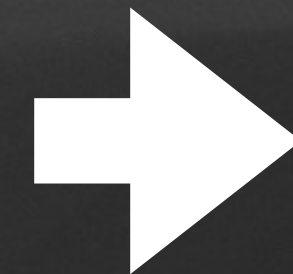
### Methods and Results

This study included 3460 participants attending  $\geq 1$  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:

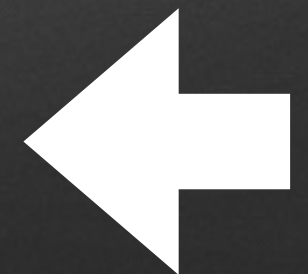
# Summary

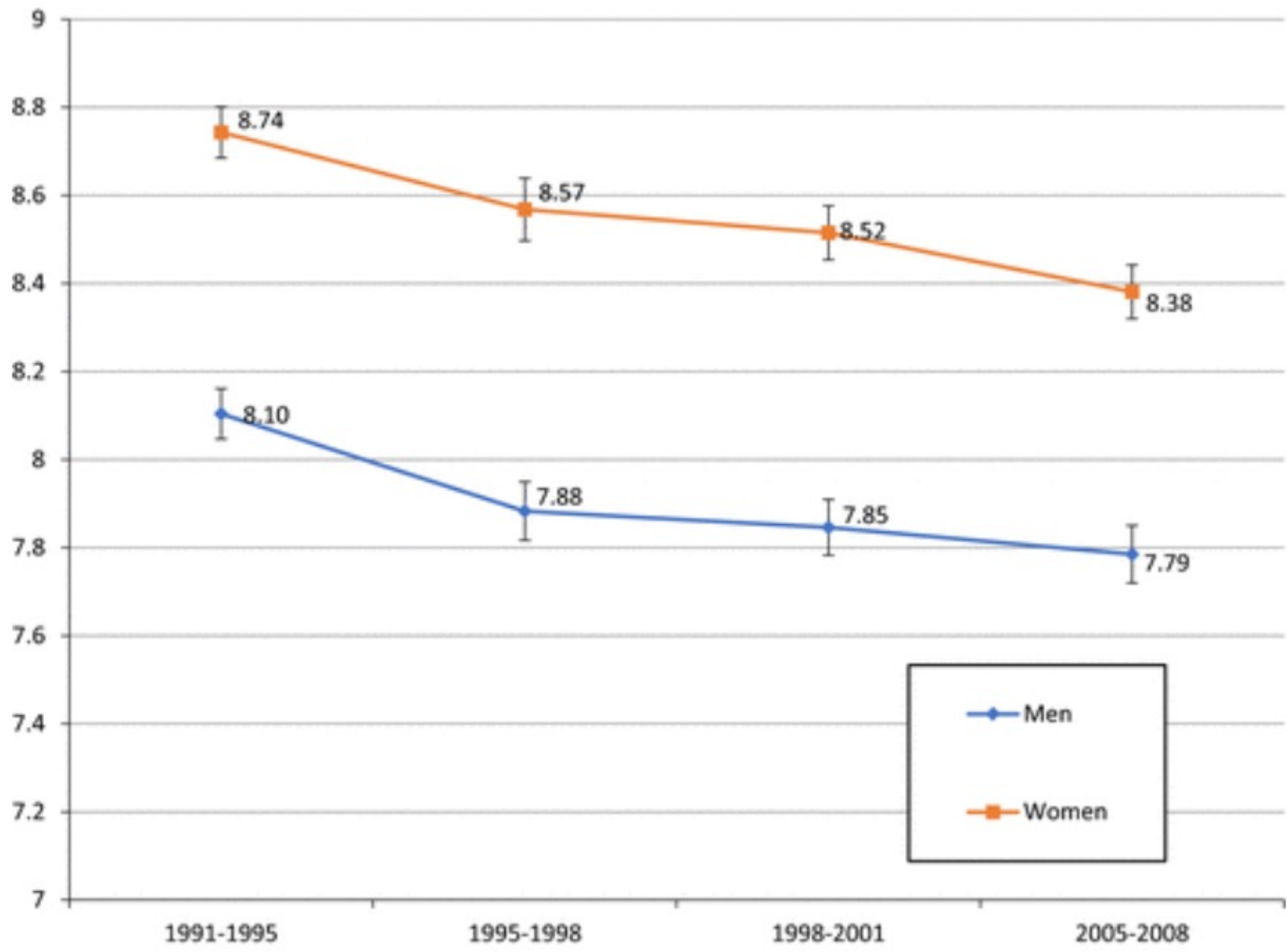
(It's not great)

- 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





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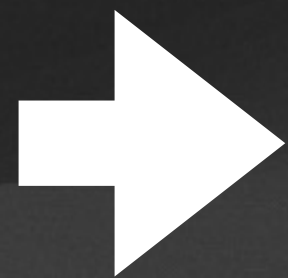
Published online 2017 Jan 25. doi: [10.1161/CIR.0000000000000485](#)

## 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.



# Individual responsibility

# Public Health Policies



Twelve years later...

# Addition of Sleep

Two major components  
Health Behaviors

Be Active, Quit Smoking,  
Eat Well, Sleep Well

Health Factors

Manage Weight, Control  
Cholesterol, Glucose, and  
Blood Pressure



# Good Sleep

7-9 hours are recommended  
for adults



## 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](https://heart.org/lifes8)

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### 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.

**Bring it all together with  
My Life Checklist**

## 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**

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**YOUR HEART HEALTH SCORE**

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**64.7%**

**Mean Cardiovascular Health Score for adults in the US**

# 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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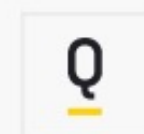
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# Life's Simple 7: Vital But Not Easy

Eduardo Sanchez 

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



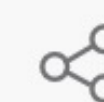
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NOTE

In this issue of the *Journal of the American Heart Association (JAHA)*, the study by Enserro et al<sup>1</sup> 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.”<sup>2</sup> Centuries later, Breslow and Breslow identified 7 health habits that, on the basis of a 35-year observational study of 7000 people in



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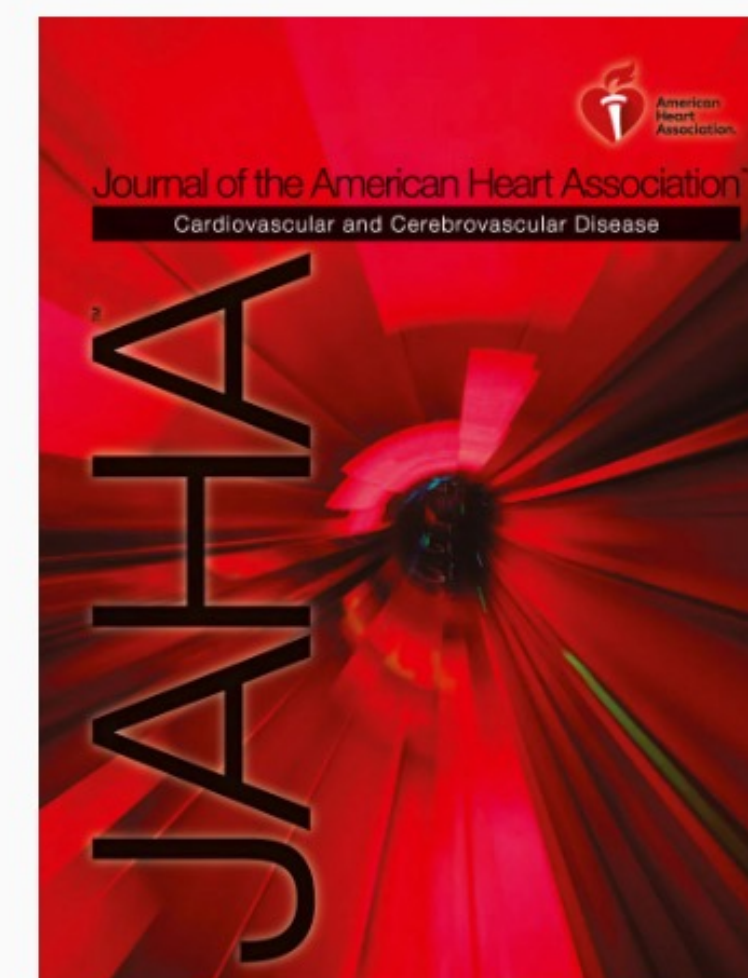
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# American Heart Association's Life's Simple 7: Lifestyle Recommendations, Polygenic Risk, and Lifetime Risk of Coronary Heart Disease

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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## 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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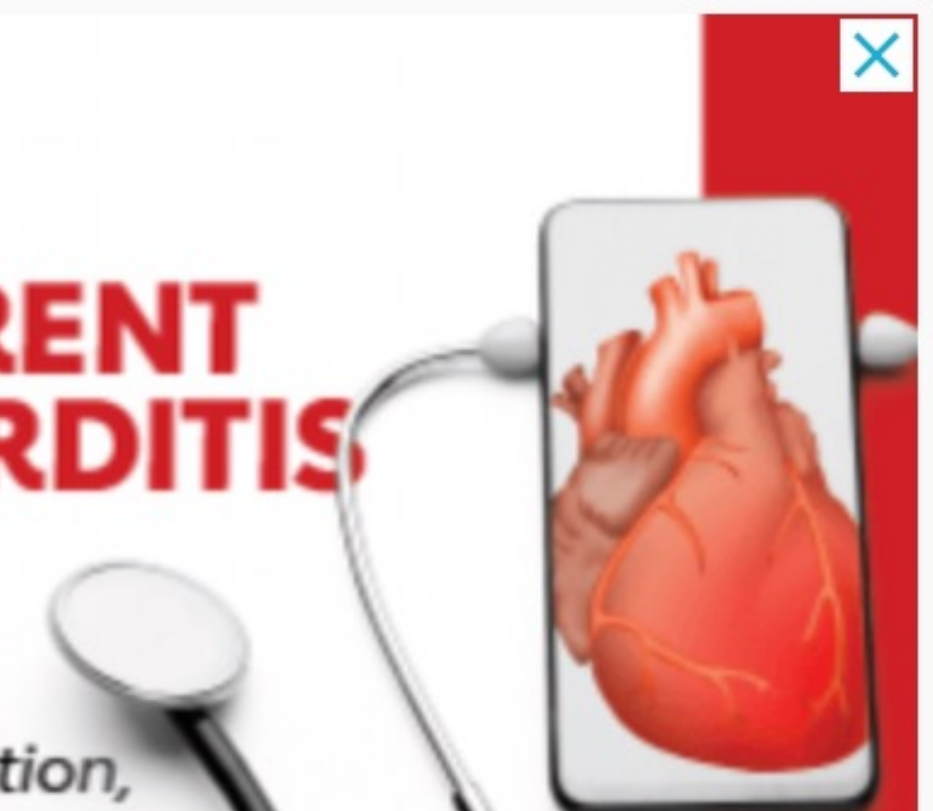
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# Forecasting the Future of Cardiovascular Disease in the United States

## A Policy Statement From the American Heart Association

Paul A. Heidenreich, Justin G. Trogon, 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

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and Council on Clinical Cardiology

and Council on Epidemiology and Prevention

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and Council on Cardiovascular Nursing

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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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# 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  $\geq 1$  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: starting CVH score  $\geq 8$ , last score of  $\geq 8$ , referent; high-low:  $\geq 8$  start and  $\leq 7$  last; low-high:  $\leq 7$  start and  $\geq 8$  last; and low-low:  $\leq 7$  start and  $\leq 7$  last) and related them to subclinical CVD cross-sectionally, and incident CVD and death. Fewer people have ideal CVH scores over the past 20 years (8.5% for 1991–1995, 5.9% for 2005–2008,  $P=0.002$ ), because of decreases in those

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June 5, 2018  
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1. ABOUT THESE STATISTICS

# 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 

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## 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



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

[Michiaki Nagai](#),<sup>1,2</sup> [Satoshi Hoshide](#),<sup>1</sup> and [Kazuomi Kario](#)<sup>1,\*</sup>

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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.

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## A historical perspective on the discovery of statins

[Akira ENDO](#)<sup>\*1†</sup>

Editor: Teruhiko BEPPU

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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.

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