



American Heart Association.

EmPOWERED to Serve™

AMGEN®

Cardiology

# KNOW YOUR FAMILY HEALTH HISTORY

#EmPOWERChange

Amgen proudly supports the American Heart Association's EmPOWERED to Serve Initiative

# KNOW YOUR FAMILY HEALTH HISTORY | LESSON OVERVIEW

## Welcome

- What is EmPOWERED to Serve?
- Program Topic and Urgent Community Need

## Health Lesson

- Knowing your family's health history is important to your heart health.
- You can learn more about your risk of heart disease from your family's health history.
- A healthy lifestyle can reduce your risk of heart disease.

## Closing Thoughts

- Create A Culture Of Health
- Online Resources





# WHAT IS EMPOWERED TO SERVE?

**EmPOWERED to Serve** is a movement inspiring those who are passionate about driving change through health justice in their communities.

We are catalysts for change, empowering the equity equation.



**AHA's Mission Statement:**  
To be a relentless force for a world of longer, healthier lives.

# **POINT 1: KNOWING YOUR FAMILY'S HEALTH HISTORY IS IMPORTANT TO YOUR HEART HEALTH.**

**Has a member of your family been diagnosed with heart disease?  
Did a close relative die of a heart attack or stroke?**

Knowing the answers to these questions can help you understand your risks of developing heart disease and to take steps to reduce those risks.



# TYPES OF CARDIOVASCULAR CONDITIONS WITH AN INHERITED GENETIC COMPONENT

Some of the types of cardiovascular conditions that are inherited include:

- **High blood pressure:** A condition that makes your heart work harder
- **Cardiomyopathies:** Heart muscle diseases that can cause heart failure
- **Thoracic aortic aneurysms and dissections:** Conditions that cause the body's major artery to balloon and rupture
- **Arrhythmias:** Abnormal heart rhythms that can cause death
- **Familial hypercholesterolemia:** An extremely high LDL (bad) cholesterol level that significantly increases the chances of a heart attack





# HOW MUCH FAMILY HISTORY DO YOU NEED TO KNOW?

**If possible, your family history should go back three generations. If you don't know the full history, start with your immediate family.**

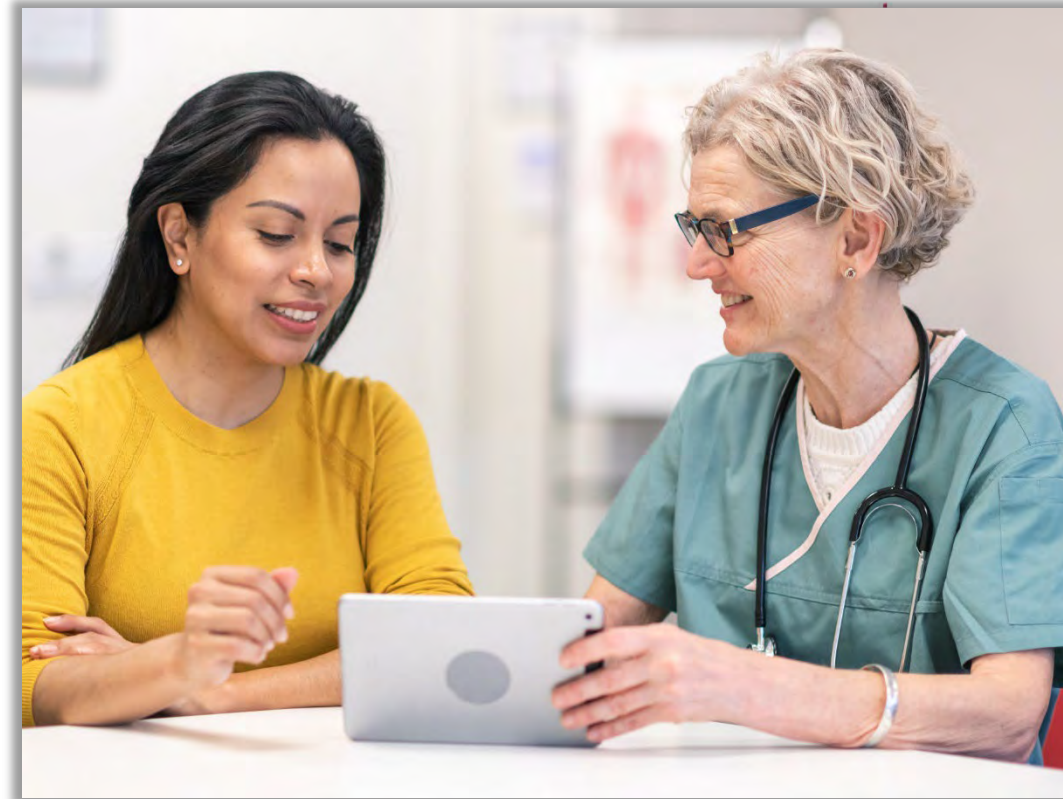
Find out the health information of your parents, grandparents and siblings to determine if they have had heart disease or stroke. Also, find out how old they were when they developed the conditions.



# GENETIC TESTING

**Our genes can influence whether we develop cardiovascular disease.**

Knowing the hereditary roots of some cardiovascular diseases through genetic testing can allow your doctor to identify risks, make important health decisions and effectively treat conditions. Sometimes genetic tests can also help prevent heart disease.





# WHO SHOULD GET GENETIC TESTING FOR HEART DISEASE?

A genetic test is reserved for specific cases. To determine if you should get one, first work with your doctor to document your family history, ideally going back three generations.

Then, screenings are for people diagnosed with an inherited cardiovascular disease, those suspected of having one and those with a family member who has a gene variation for one of the conditions.





# POINT 2: YOU CAN LEARN MORE ABOUT YOUR RISK OF HEART DISEASE FROM YOUR FAMILY'S HEALTH HISTORY.

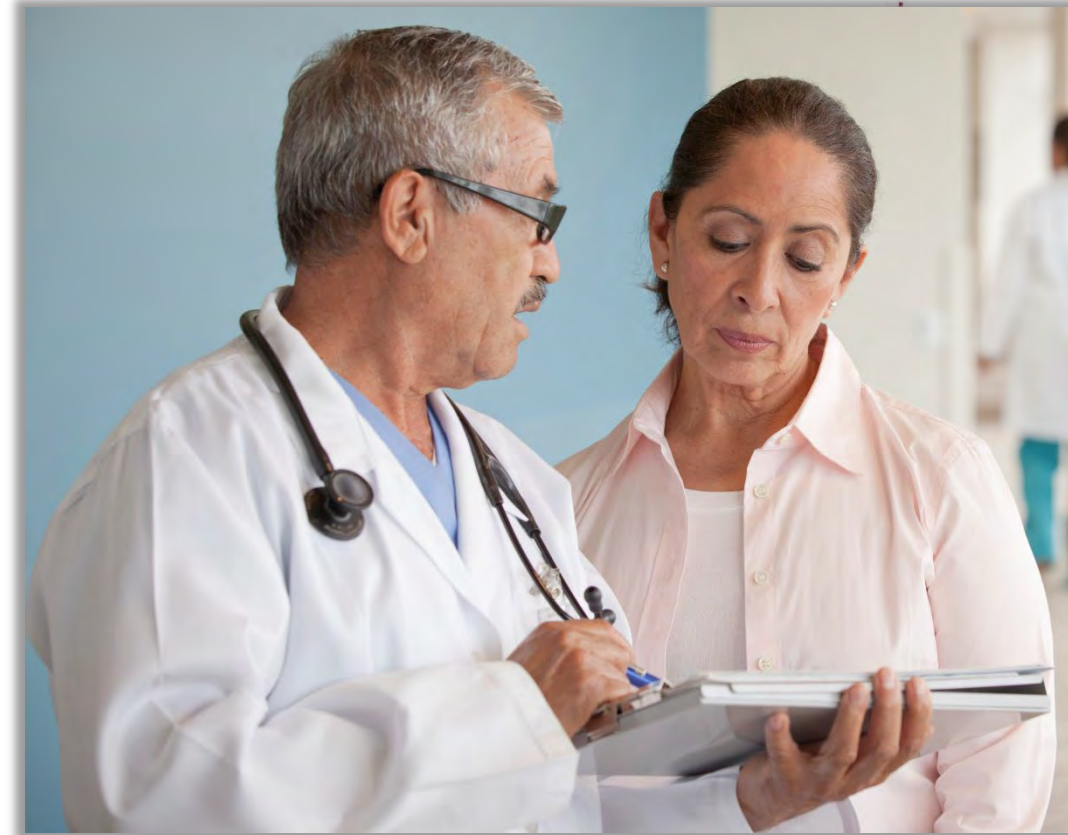
## Family History and Cholesterol

- Cholesterol is a waxy substance that comes from your body or from certain foods.
- High cholesterol is associated with heart disease and can have a genetic component.
- The different types of cholesterol are:
  - **Dietary cholesterol:** Comes from animal sources such as poultry, meat or dairy
  - **LDL (low-density lipoprotein) cholesterol:** Considered the bad cholesterol because it can cause atherosclerosis, which is clogging of the arteries
  - **HDL (high-density lipoprotein) cholesterol:** Considered good cholesterol because it removes LDL from your body
  - **Serum cholesterol:** The total amount of cholesterol in the bloodstream



# FAMILIAL HYPERCHOLESTEROLEMIA (FH)

- Those who have familial hypercholesterolemia (FH) inherit a defect in how the body recycles LDL (bad) cholesterol.
- FH causes LDL levels in the blood to remain extremely high (more than 190 milligrams per deciliter).



# FAMILIAL HYPERCHOLESTEROLEMIA EFFECTS

**1 in 250 adults** (834K people) have been diagnosed with the FH genetic mutation.

## Men with FH

- Develop coronary heart disease **20 years earlier**.
- Half of men with untreated FH have a heart attack or angina before age 50.

## Women with FH

- Develop heart disease **30 years earlier**.
- About 30% of women with the condition have a heart attack before age 60.





# FAMILIAL HYPERCHOLESTEROLEMIA CAUSES

- Familial hypercholesterolemia is caused by a mutation in the gene for the LDL cholesterol receptor.
  - This receptor is responsible for removing LDL from the body.
- Mutations in other genes, such as the PCSK9 gene and the gene for Apolipoprotein B, can also cause FH.
- FH can be **heterozygous** (passed down from one parent) or **homozygous** (passed down from both parents).
  - Those with homozygous FH may need bypass surgery before they reach adulthood.



# DIAGNOSING FAMILIAL HYPERCHOLESTEROLEMIA

- People with FH may have cholesterol deposits in the Achilles tendons or in the tendons of the hands or elbows.
- Some people with the condition have no physical symptoms.
- FH is diagnosed through physical examinations, lab tests and personal and family medical histories.
- Children at risk of FH should be evaluated between ages 6 and 12.



# FAMILIAL HYPERCHOLESTEROLEMIA TREATMENT

- Early detection is important for fighting FH.
- FH is treated by a statin drug and cholesterol-lowering drugs such as ezetimibe.
- Bile acid sequestrants such as cholestyramine or colesevelam are also used to treat FH.
- Those with very high LDL may need a dialysis-like procedure called LDL apheresis.

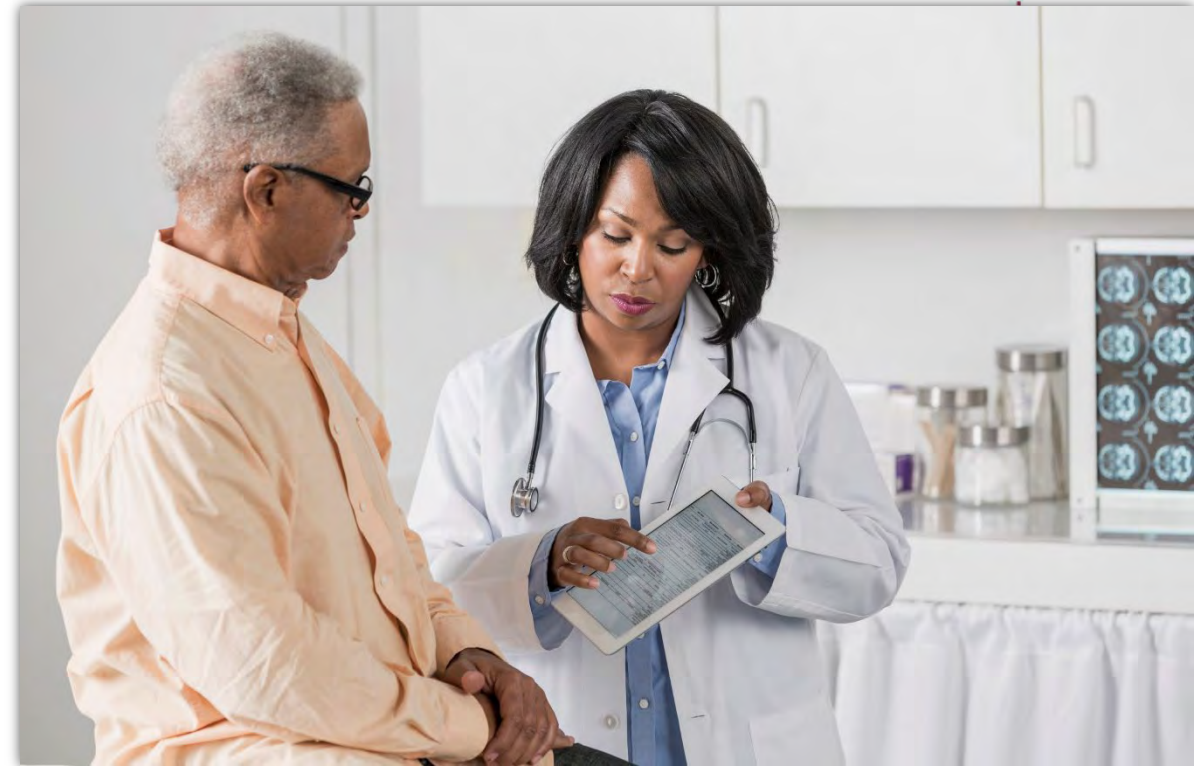




# HYPERTROPHIC CARDIOMYOPATHY (HCM)

Hypertrophic cardiomyopathy, or HCM, is a rare disease that causes heart muscle cells to enlarge.

This causes the ventricle walls to thicken and possibly block the flow of blood. HCM is associated with blood clots, stroke, heart failure and sudden cardiac deaths.



# TYPES OF HYPERTROPHIC CARDIOMYOPATHY

- **Obstructive HCM:** The most common type of HCM, this occurs when the wall between the bottom chambers of the heart thickens and becomes stiff. This can block blood flow from the left ventricle to the aorta.
- **Nonobstructive HCM:** The heart's main pumping chamber becomes stiff, but the flow of blood doesn't get blocked. Instead, it limits how much blood the ventricle can take in and pump out.



# DIAGNOSING HYPERTROPHIC CARDIOMYOPATHY

- Work with your doctor if family members have been diagnosed with HCM, heart failure or cardiac arrest.
- Get a physical examination to check the heart and lungs.
- **If needed, get diagnostic tests and procedures, including:**
  - Genetic testing
  - Stress tests
  - Cardiac MRI
  - Coronary angiography
  - Cardiac catheterization





# HYPERTROPHIC CARDIOMYOPATHY TREATMENT

## Medications

- Beta-blockers
- Calcium channel blockers
- Diuretics

## Procedures

- Heart transplant
- Septal myectomy
- Alcohol septal ablation (nonsurgical procedure)

## Surgically implanted devices

- Implantable cardioverter defibrillator (ICD)
- Pacemaker
- Cardiac resynchronization therapy (CRT) device



# OTHER GENETIC CARDIOVASCULAR DISEASE RISK FACTORS

## African Americans:

Have a higher risk of developing high blood pressure, stroke and diabetes.

### In 2009:

- 46,334 black males and 48,070 black females died from cardiovascular disease
- 6,962 black males and 8,916 black females died from a stroke
- 6,574 black males and 6,951 black females died from high blood pressure



# OTHER GENETIC CARDIOVASCULAR DISEASE RISK FACTORS

## Hispanics:

- 1 in 3 Hispanics have high blood pressure
- Almost half have high blood cholesterol
- 2.8% of Hispanic adults have had a stroke
- 22.2% of Hispanic adults have high blood pressure





# OTHER NON-MODIFIABLE RISK FACTORS THAT MAY CAUSE HEART DISEASE

## Age:

The older people get, the more their chances of dying from coronary heart disease increases.

## Gender:

- Men have a greater chance of having a heart attack than women and have heart attacks earlier in life.
- After going through menopause, women's death rate from a heart attack increases, but they're still less likely to have them than men.



## **POINT 3: A HEALTHY LIFESTYLE CAN REDUCE YOUR RISK OF HEART DISEASE.**

Just because your family has a history of cardiovascular disease — or you have other uncontrollable risk factors — doesn't mean you're destined to have it.

**You can make lifestyle changes to help reduce risks.**



# LIFESTYLE CHANGES THAT REDUCE THE RISK OF CARDIOVASCULAR DISEASE



## Manage blood pressure:

Keeping your blood pressure at a healthy level (no more than 120/80) can reduce the strain on your heart, arteries and kidneys.



## Manage cholesterol levels:

High cholesterol can clog your arteries, which can lead to heart disease and stroke.



## Reduce blood sugar level:

Although our body uses sugar (or glucose) in the blood for energy, high levels can damage the heart, kidneys, nerves and eyes.



# LIFESTYLE CHANGES THAT REDUCE THE RISK OF CARDIOVASCULAR DISEASE



## Increase physical activity:

Get at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity, or a combination of both, preferably spread throughout the week.



## Improve diet:

A healthy eating pattern includes veggies, fruits, whole grains, low-fat and fat-free dairy, protein such as eggs, fish, lean meat, poultry, legumes, nuts and seeds, and polyunsaturated and monounsaturated canola, olive, peanut, safflower and sesame oil. Limit salty and processed foods, sugary drinks, sweets and fatty meats, and avoid partially hydrogenated and tropical oils.



# LIFESTYLE CHANGES THAT REDUCE THE RISK OF CARDIOVASCULAR DISEASE



## **Lose weight:**

Extra fat and pounds can increase your blood pressure and put an extra burden on your heart, blood vessels, lungs and skeleton.



## **Quit smoking:**

If you smoke cigarettes, it will increase your chances of developing cardiovascular disease.



## **Reduce stress:**

High levels of stress can be a contributing factor for heart attacks. Some ways to manage stress include engaging in hobbies, spending time in nature or with pets, meditating and exercising.



# YOUR VOICE MATTERS

We all have the power to make a difference by speaking out for policies that help build healthier communities and healthier lives.

Join **You're the Cure** today and be among the first to know when major policy initiatives pass or when your help is needed to advocate for a healthy future.

Text **EMPOWER** to **46839** join today!





# USE YOUR VOICE TO CREATE HEALTHIER COMMUNITIES

You can help us work to draw communities together on the path to building a sustainable culture of health.

Go to [EmPOWEREDtoServe.org](https://EmPOWEREDtoServe.org)

Sign up to become an ambassador and learn how you can be a part of the movement!

**Join us as we impact the health of ALL in our communities!**



# WRAP-UP

**We appreciate your thoughts!**

Tell us what you liked best.

Email us at:  
[empoweredtoserve@heart.org](mailto:empoweredtoserve@heart.org)





# WE ARE **EMPOWERED TO SERVE**

...serve our health, serve our community



**The American Heart Association requests that this document be cited as follows:**

American Heart Association EmPOWERED to Serve Health Lessons.

[EmPOWEREDtoServe.org](https://www.heart.org/empoweredtoserve.org)



Amgen proudly supports the American Heart Association's EmPOWERED to Serve Initiative



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