

# Coronary Artery Disease Is it Inevitable?

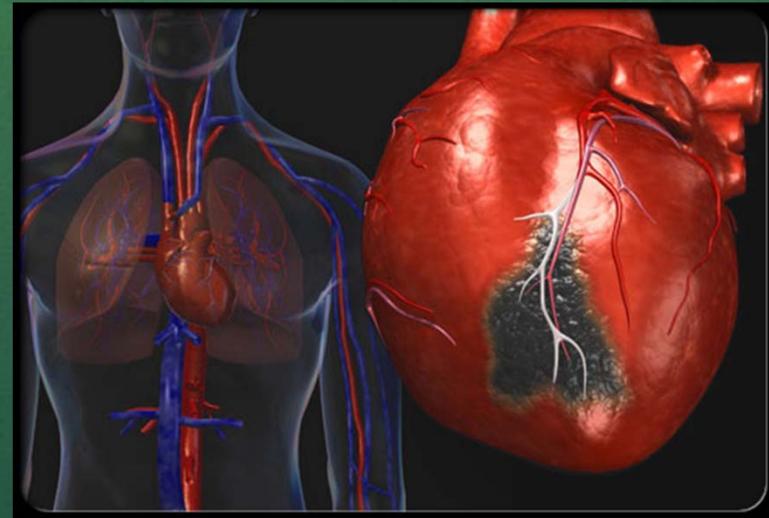
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# Coronary Artery Disease

- Affects 14 Million Men and Women in the United States
- Every 20 seconds, a Person in the U.S. has a Heart Attack
- Every 34 seconds a Person in the U.S. Dies of Heart Disease
- More than 2500 Americans Die of Heart Disease Each Day
- More than 250,000 Americans Die of Heart Attacks Each Year Before They Reach the Hospital
- Coronary Artery Disease Has Been the #1 Killer in the U.S. every year since 1900 Except 1918 (WWI & Influenza)

# What Is a Heart Attack?

- 1. Every year more than 1 million Americans have a heart attack – a sudden interruption in the heart's blood supply.
- This happens when there is a blockage in the coronary arteries (the vessels that carry blood to the heart muscle).
- When blood flow is blocked, heart muscle can be damaged very quickly and die.
- Prompt emergency treatments have reduced the # of deaths from heart attacks in recent years.



# Heart Attack Symptoms



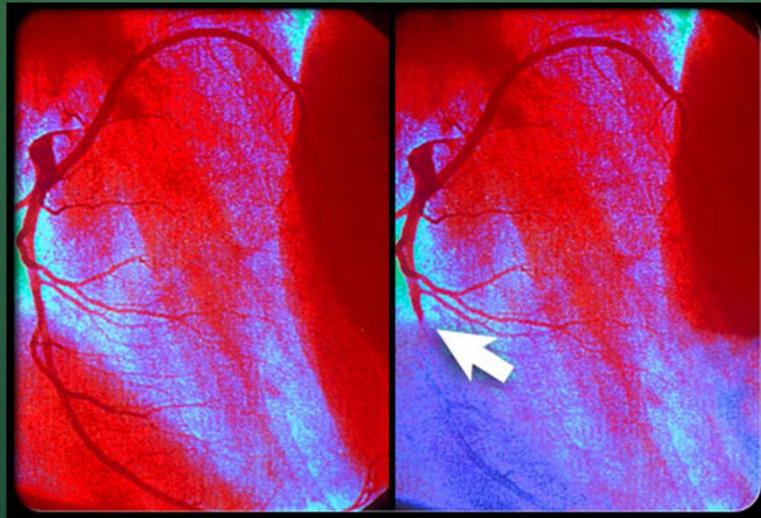
- -A Heart Attack is an emergency even when the symptoms are mild.
- Warning signs include:
  1. Pain or pressure in the chest.
  2. Discomfort spreading to the back, jaw, throat or arm.
  3. Nausea, indigestion or heartburn.
  4. Weakness, shortness of breath or anxiety.
  5. Rapid or irregular heartbeat.

# Heart Attack Symptoms in Women



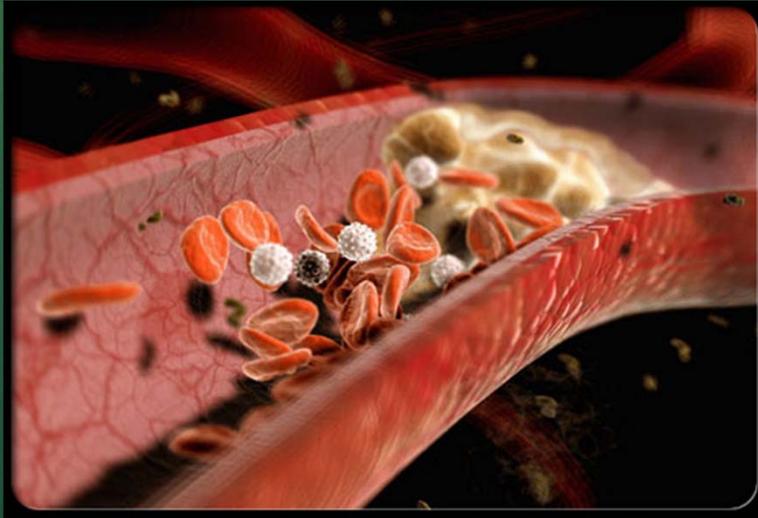
- Women don't always feel chest pain with a heart attack.
- Women are more likely than men to have heartburn, loss of appetite, tiredness or weakness, coughing, and heart flutters.
- These symptoms should not be ignored.
- The longer you postpone treatment, the more damage the heart may sustain.

# Signs of Coronary Artery Disease



- A precursor to a heart attack, coronary artery disease or CAD occurs when sticky plaque builds up inside the coronary arteries. This narrows the arteries, making it more difficult for blood to flow through.
- Many people don't know they have CAD until a heart attack strikes. But there are warning signs, such as recurring chest pain caused by the restricted blood flow. This pain is known as angina.

# Inside a Heart Attack



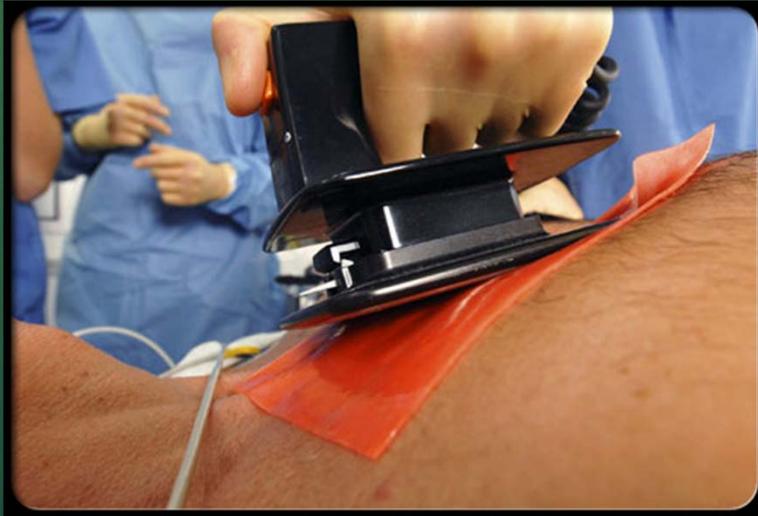
- The plaque deposited in your arteries is hard on the outside and soft and mushy on the inside.
- Sometimes the hard outer shell cracks. When this happens, a blood clot forms around the plaque.
- If the clot completely blocks the artery, it cuts off the blood supply to a portion of the heart.
- Without immediate treatment, that part of the heart muscle could be damaged or destroyed.

# Don't Wait to Be Sure



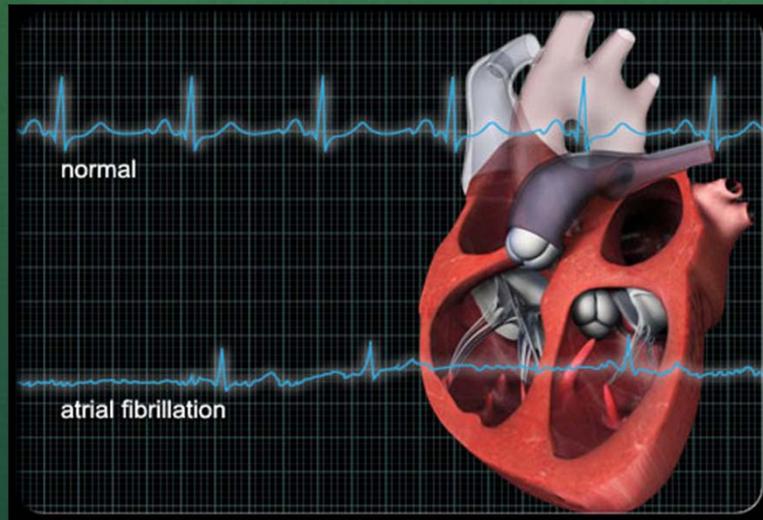
- The best time to treat a heart attack is as soon as symptoms begin.
- Waiting to be sure can result in permanent heart damage or even death.
- If you think you may be having a heart attack, call 911.
- And don't try driving yourself to the hospital.
- When you call 911, the EMS staff can start emergency care as soon as they reach you.

# Sudden Cardiac Death



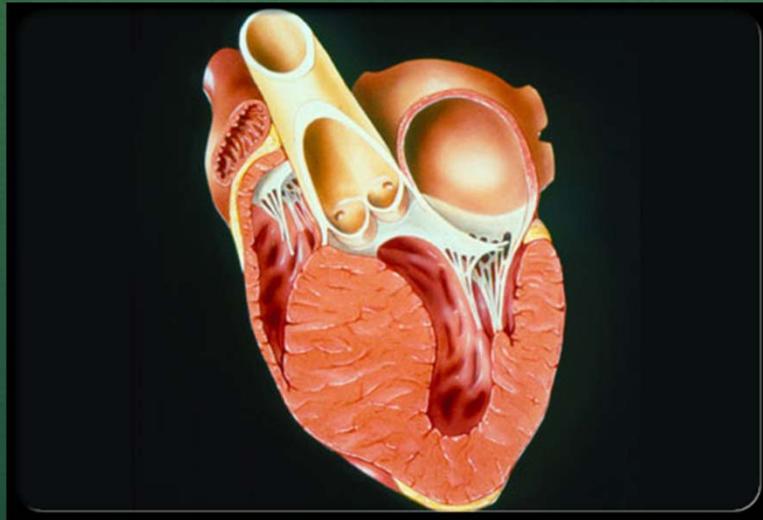
- Sudden cardiac death (SCD) accounts for half of all heart disease deaths in the U.S., but it's not the same as a heart attack.
- SCD occurs when the heart's electrical system goes haywire, causing it to beat irregularly and dangerously fast.
- The heart's pumping chambers may quiver instead of pumping blood out to the body.
- Without CPR and restoration of a regular heart rhythm, death can occur in minutes.

# Arrhythmia: Erratic Heart Beat



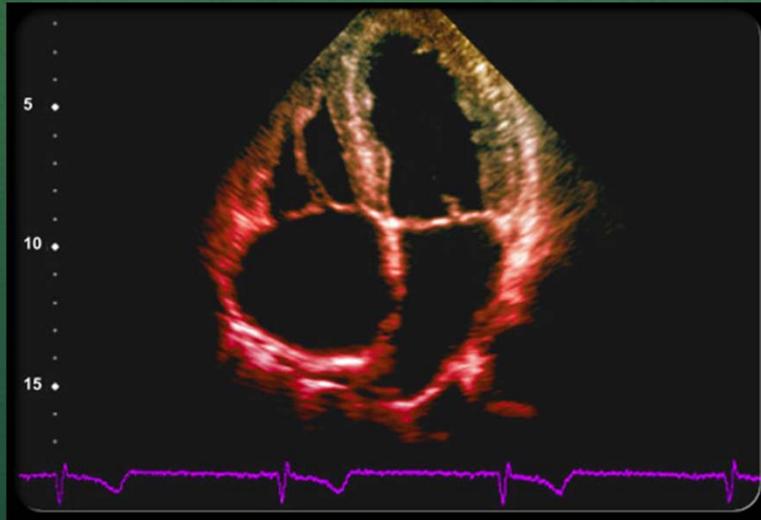
- Regular electrical impulses cause your heart to beat.
- But sometimes those impulses become erratic. The heart may race, slow down, or quiver.
- Arrhythmias are often harmless variations in rhythm that pass quickly.
- But some types make your heart less effective at pumping blood, and that can take a serious toll on the body.
- Let your doctor know if you've noticed your heart beating abnormally.

# Cardiomyopathy



- Cardiomyopathy is a disease involving changes in the heart muscle.
- These changes may interfere with the heart's ability to pump effectively, which can lead to a chronic condition called heart failure.
- Cardiomyopathy is sometimes associated with other chronic conditions, such as high blood pressure or heart valve disease.

# Heart Failure



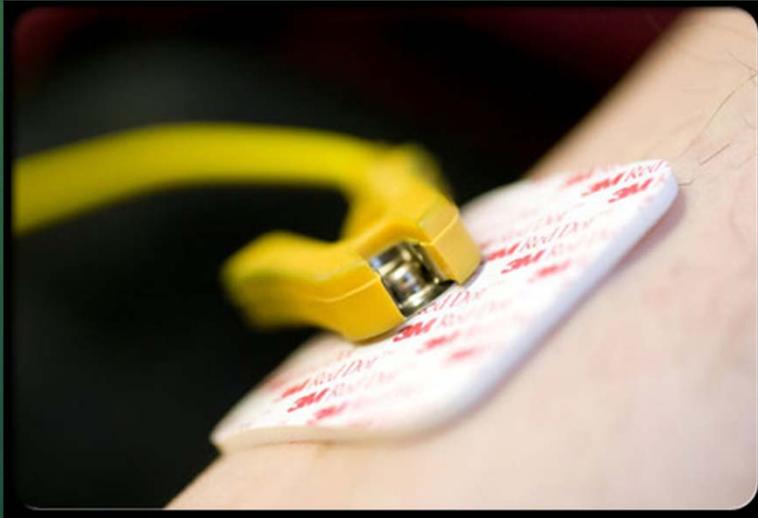
- Heart failure doesn't mean your heart stops working.
- It means the heart can't pump enough blood to meet the body's needs.
- Over time, the heart gets bigger to hold more blood, it pumps faster to increase the amount of blood moving out of it, and the blood vessels narrow.
- The heart muscle may also weaken, reducing the blood supply even more.
- Most cases of heart failure are the result of coronary artery disease and heart attacks.

# Congenital Heart Defect



- A congenital heart defect is one that's present at birth.
- The problem could be a leaky heart valve, malformations in the walls that separate the heart chambers, or other heart problems.
- Some defects are not found until a person becomes an adult.
- Some need no treatment. Others require medicine or surgery.
- People with congenital heart defects may have a higher risk of developing complications such as arrhythmias, heart failure, and heart valve infection, but there are ways to reduce this risk.

# Testing: Electrocardiogram (EKG)



- An EKG (also ECG) is a painless test that uses electrodes placed on the skin to record the heart's electrical activity.
- The test provides information about your heart rhythm and damage to the heart muscle.
- An EKG can help your doctor diagnose a heart attack and evaluate abnormalities such as an enlarged heart.
- The results can be compared to future EKGs to track changes in the condition of your heart.

# Testing: Stress Test



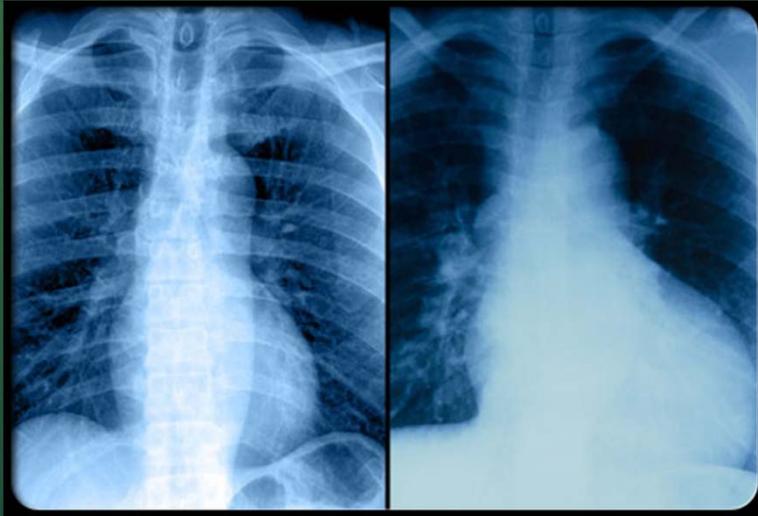
- The stress test measures how your heart responds to exertion.
- If you have an exercise stress test, you'll either walk on a treadmill or ride a stationary bike while the level of difficulty increases.
- At the same time, your EKG, heart rate, and blood pressure will be monitored as your heart works harder.
- Doctors use a stress test to evaluate whether there is an adequate supply of blood to the heart muscle.

# Testing: Holter Monitor



- A Holter monitor is a portable heart rhythm recorder.
- If your doctor suspects a heart rhythm problem, she may ask you to wear one for 1 or 2 days.
- It records the heart's continuous electrical activity day and night, compared with an EKG, which is a snapshot in time.
- The doctor will probably also ask you to keep a log of your activities and to note any symptoms and when they occur.

# Testing: Chest X-ray



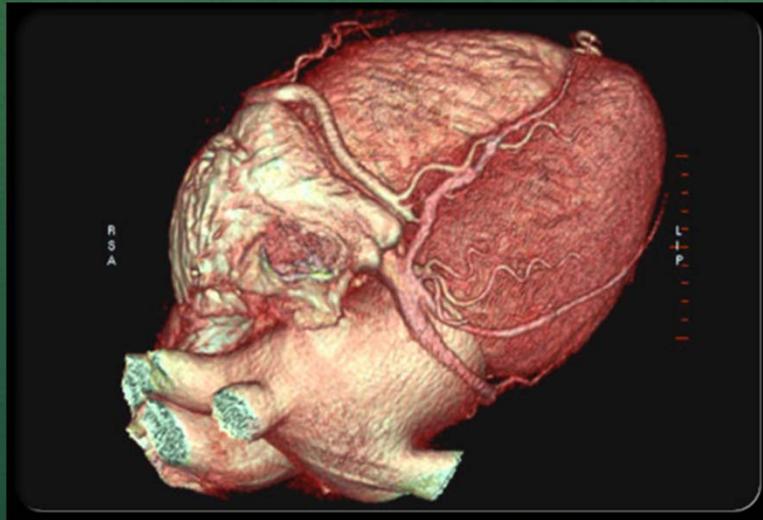
- A chest X-ray is a picture of your heart, lungs, and chest bones that's made by using a very small amount of radiation.
- Chest X-rays can be used to look for heart and lung abnormalities.
- In this image, the bulge seen on the right side is an enlarged left ventricle, the heart's main pumping chamber.

# Testing: Echocardiogram



- An echocardiogram uses sound waves (ultrasound) to generate moving images of the heart.
- The test can assess the chambers and valves of your heart and how well your heart muscle and heart valves are working.
- It's useful in diagnosing and evaluating several types of heart disease, as well as evaluating the effectiveness of treatments.

# Testing: Cardiac CT



- Cardiac computerized tomography (known as cardiac CT) takes detailed images of the heart and its blood vessels.
- A computer stacks the images to create a 3-D picture of heart.
- A cardiac CT can be used to look for plaque or calcium buildup in the coronary arteries, heart valve problems, and other types of heart disease.

# Testing: Cardiac Catheterization



- Cardiac catheterization helps diagnose and treat some heart conditions.
- The doctor guides a narrow tube, called a catheter, through a blood vessel in your arm or leg until it reaches the coronary arteries.
- Dye is injected into each coronary artery, making them easy to see with an X-ray.
- This reveals the extent and severity of any blockages.
- Treatments such as angioplasty or stenting can be done during this procedure.

# Living With Heart Disease



- Most forms of heart disease are chronic.
- In the beginning, symptoms may be too mild to affect everyday life.
- And in many cases, long-term treatment can keep symptoms under control.
- But if the heart begins to fail, patients may develop shortness of breath, fatigue, or swelling in ankles, feet, legs, and abdomen.
- Heart failure can be managed with medication, lifestyle changes, surgery, and in certain cases, a heart transplant.

# Treatment: Medicines



- Medications play a huge role in treating heart disease.
- Some drugs help lower blood pressure, heart rate, and cholesterol levels.
- Others can keep abnormal heart rhythms under control or prevent clotting.
- For patients who already have some heart damage, there are medications to improve the pumping ability of an injured heart.

# Treatment: Angioplasty



- Angioplasty is used to open a blocked heart artery and improve blood flow to the heart.
- The doctor inserts a thin catheter with a balloon on the end into the artery.
- When the balloon reaches the blockage, it is expanded, opening up the artery and improving blood flow.
- The doctor may also insert a small mesh tube, called a stent, to help keep the artery open after angioplasty.

# Treatment: Bypass Surgery



- Bypass surgery is another way to improve the heart's blood flow.
- It gives blood a new pathway when the coronary arteries have become too narrow or blocked.
- During the surgery, a blood vessel is first moved from one area of the body -- such as the chest, legs, or arms -- and attached to the blocked artery, allowing it to bypass the blocked part.

# Who's at Risk for Heart Disease?



- Men have a higher risk of having a heart attack than women, and at an earlier age.
- But it's important to note that heart disease is the No. 1 killer of women, too.
- People with a family history of heart ailments also have a higher risk of heart trouble.

# Risk Factors You Can Control



- High cholesterol and high blood pressure are major risk factors for heart disease.
- Being overweight, obese, or physically inactive all increase your risk.
- So does diabetes, especially if your glucose levels are not well controlled.
- Discuss your risks with your doctor and develop a strategy for managing them.
- There are many steps you can take to protect your heart.

# Smoking and Your Heart



- If you smoke, your risk of heart disease is 2 to 4 times greater than a nonsmoker's.
- And if you smoke around loved ones, you're increasing their risk with secondhand smoke.
- Each year in the U.S., more than 135,000 people die from smoking-related heart disease.
- But it's never too late to quit. Within 24 hours of quitting, your heart attack risk begins to fall.

# Life After a Heart Attack



- It is possible to regain your health after a heart attack.
- By avoiding cigarettes, becoming more active, and watching what you eat, you can give your heart and overall health a big boost.
- One of the best ways to learn how to make these changes is to take part in a cardiac rehab program.
- Ask your doctor for recommendations.

# Heart Disease Prevention



- The key to preventing heart disease is a healthy lifestyle.
- This includes a nutritious diet, at least 30 minutes of exercise most days of the week, not smoking, and controlling high blood pressure, cholesterol, and diabetes.
- If you drink alcohol, do so in moderation – no more than one drink a day for women, two drinks a day for men.
- Ask your friends and family for help in making these changes. They'll benefit, too.

# Diet and Your Heart



- What you eat makes a difference.
- Be sure you get plenty of whole grains, vegetables, legumes, and fruits to help keep your heart healthy.
- Plant oils, walnuts, other nuts, and seeds can also help improve cholesterol levels.
- And don't forget to eat fish at least a couple of times each week for a good source of heart-healthy protein.

# So You Are An Eastern Shore Native . . . .

- Heredity is a non-modifiable risk factor
- If you have a family history of early CAD (males in their 40s or females in their 50s) you need to address all the modifiable risk factors that you can
- STOP SMOKING – smoking increases your chances of developing CAD 2 to 4 fold
- Lower your cholesterol through diet and medication if necessary. Goals for those with a family history of CAD are a total cholesterol of <200, HDL >40 and an LDL <130.
- If you are diabetic keep it under control. Goal HgA1C is < 7.
- If you have hypertension keep it 120/70.
- Stay active. Walking 30 minutes 3 times a week is a good starting place.

# Alcohol and Coronary Artery Disease

- The data is there to support alcohol use in moderation to ward off CAD.
- What is “moderate” use?
- This requires defining a “drink”. A drink is 1.5 oz of distilled spirits (80 proof), one 12 oz beer or 5 oz of wine.
- Obviously, if alcoholism runs in your family this is one recommendation to skip.