



CSUS

# Cardiovascular Wellness Program

## Chest Pain

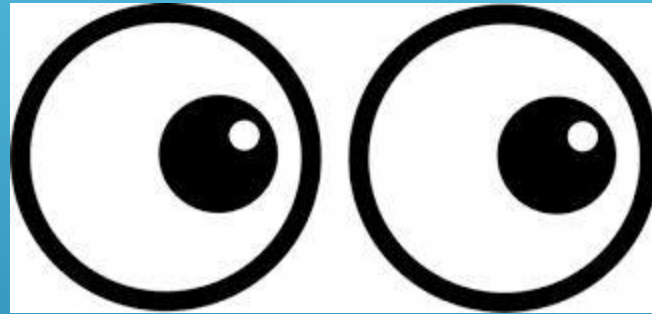
**Signs and symptoms of coronary arterial disease**

# CHEST PAIN (ANGINA PECTORIS)

What is my heart telling me?

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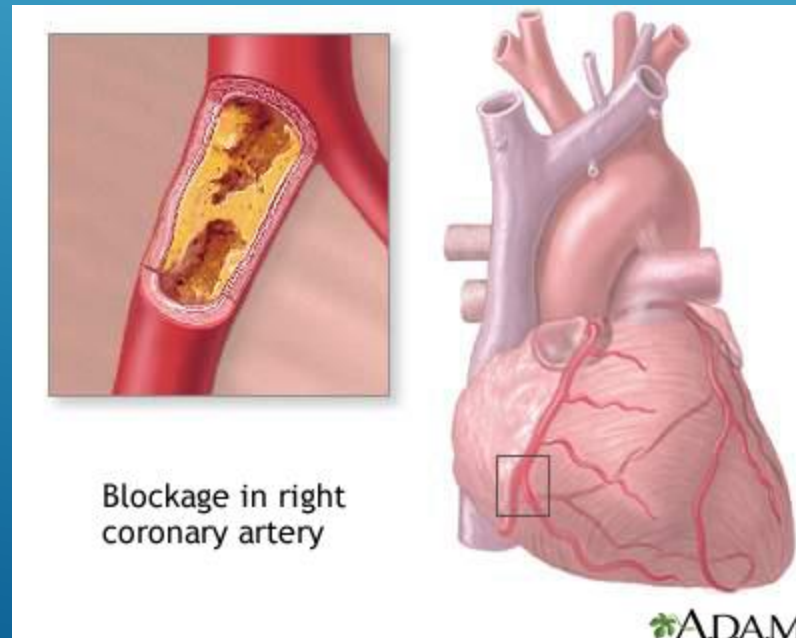


[https://www.youtube.com/watch?v=3\\_PYnWVoUzM](https://www.youtube.com/watch?v=3_PYnWVoUzM)

Angina is chest pain or discomfort caused when your heart muscle doesn't get enough oxygen-rich blood.

Angina is not a disease. It is a symptom of an underlying heart problem, usually coronary heart disease (CHD).

Angina happens when one or more of the coronary arteries is narrowed or blocked, also called ischemia.



- Four types of Angina

- ✓ Stable angina

- ✓ Unstable angina

- ✓ Microvascular angina

- ✓ Prinzmetal's angina



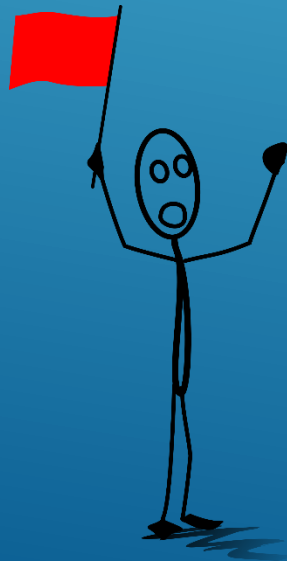
## Stable angina:

- Also called “Effort Angina”
- Discomfort is precipitated by activity
- Minimal or no symptoms at rest
- Symptoms disappear after rest/cessation of activity



## Unstable angina:

- Also called “Crescendo angina”
- Acute coronary syndrome in which angina worsens
- Occurs at rest
- Severe and of acute onset
- Crescendo pain- pain increases every time



## Microvascular angina:

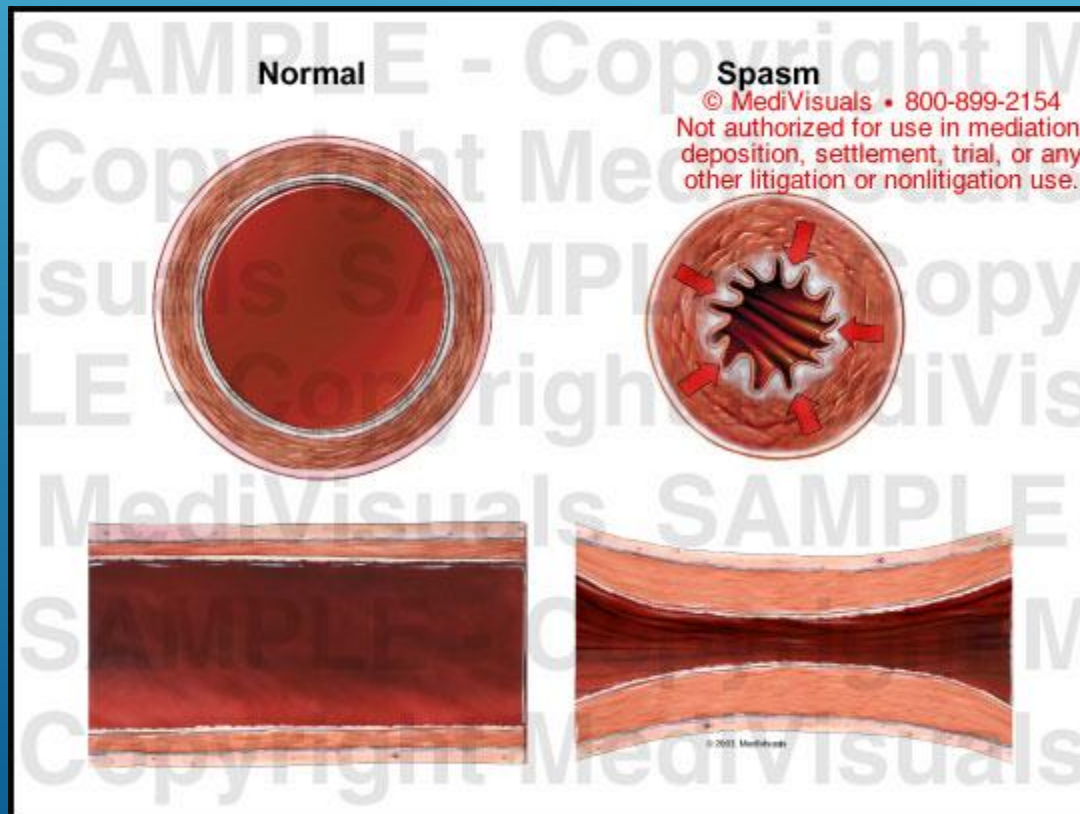
- Also called Syndrome X
- Cause unknown
- Probably due to poor functioning of the small blood vessels of the heart, arms and legs
- No arterial blockage
- Difficult to diagnose because it does not have arterial blockage
- Good prognosis

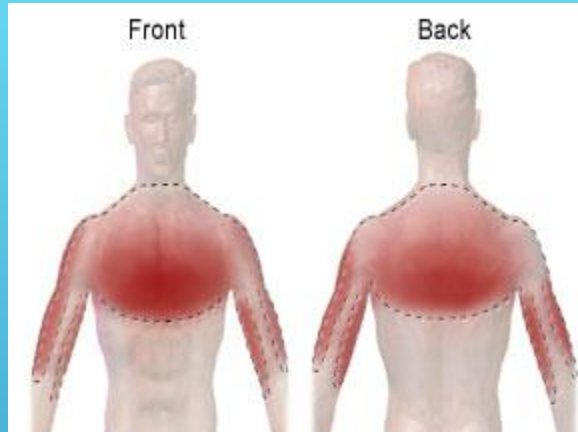
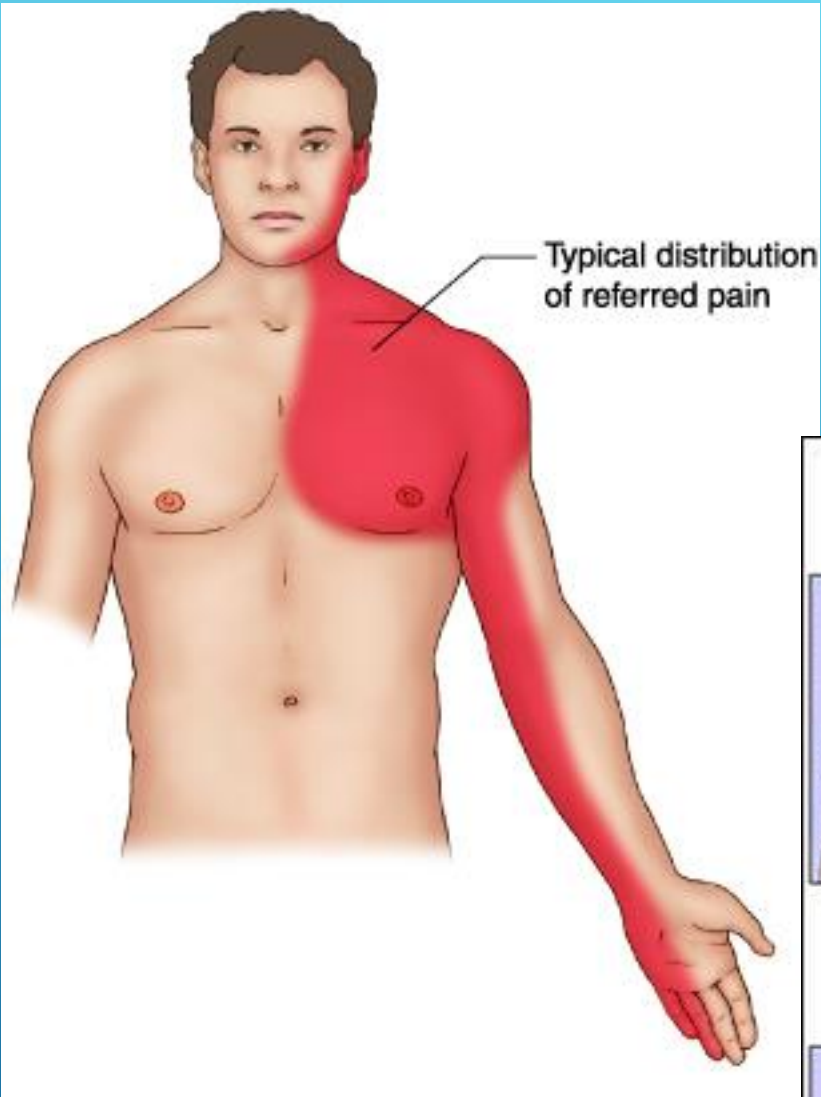




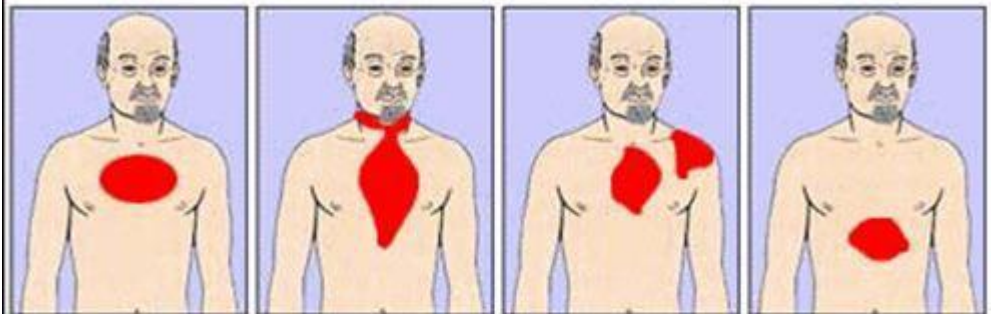
## Prinzmetal's angina

- Prinzmetal's angina is a variant form of angina with normal coronary vessels or minimal atherosclerosis
- It is probably caused by spasm of coronary artery





### Location of chest pain during angina or heart attack

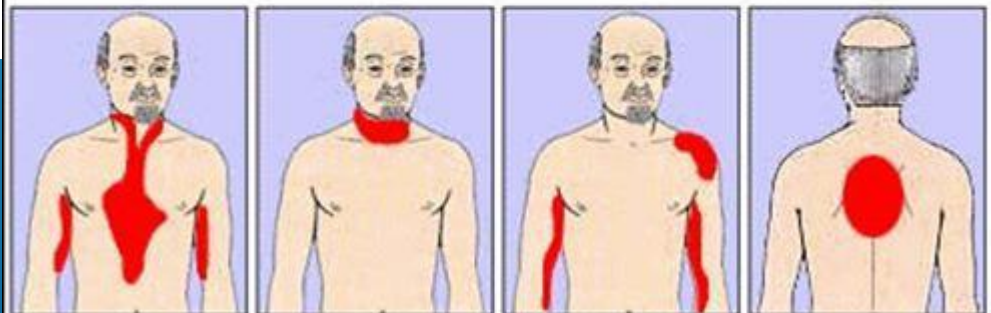


Upper chest

Substernal radiating to neck and jaw

Substernal radiating down left arm

Substernal radiating down left arm



Epigastric radiating to neck and jaw

Neck and jaw

Left shoulder and down

Intrascapular

# Women's typical chest pain symptoms..... HA!

There is nothing "typical" about any woman!!

Angina symptoms in women can include feeling out of breath, fatigue, nausea, vomiting, abdominal pain or sharp chest pain. Once the extra demand for blood and oxygen stops, so do the symptoms.

Here's the problem.....

When women are sick, they tend to ignore it!

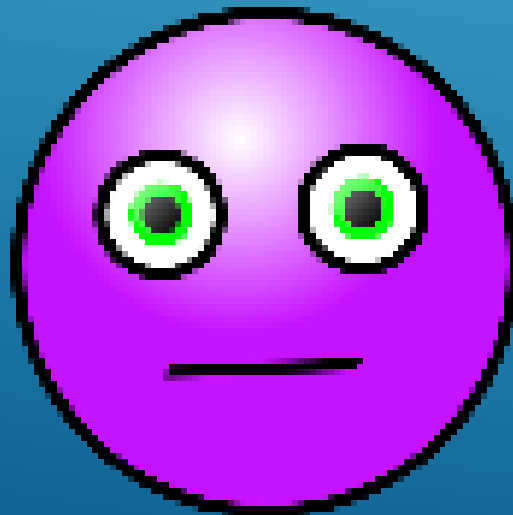
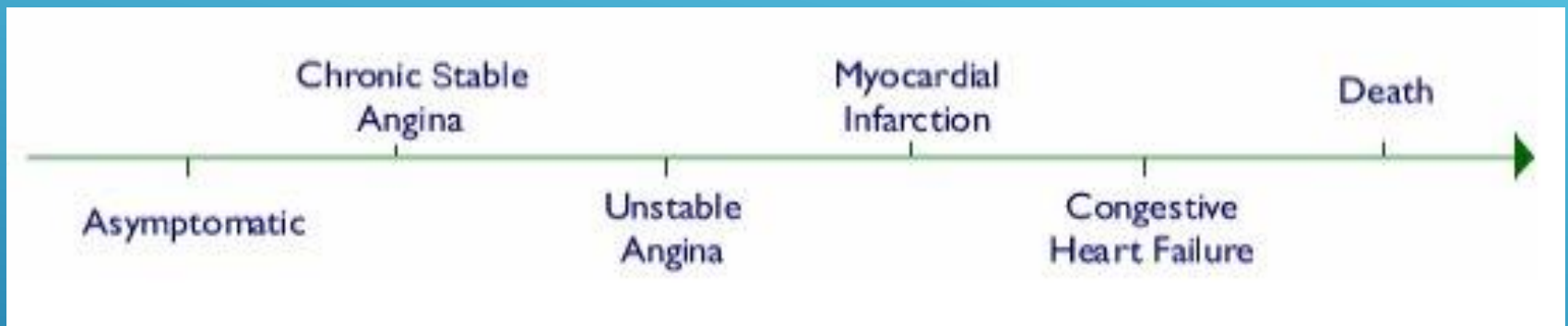


Women more frequently develop heart disease within the very small arteries that branch out from the coronary arteries. This is referred to as microvascular disease (MVD) and occurs particularly in younger women.

Up to 50 percent of women with anginal symptoms who undergo cardiac catheterization don't have the obstructive type of CAD.



Let's review what we know.....



## Treatment:

- Aims:

- ✓ Relief of symptoms

- ✓ Slowing progression of the disease

- ✓ Reduction of future events like myocardial infarction



**Nitrates.** Nitrates are often used to treat angina. Nitrates relax and widen your blood vessels, allowing more blood to flow to your heart muscle.

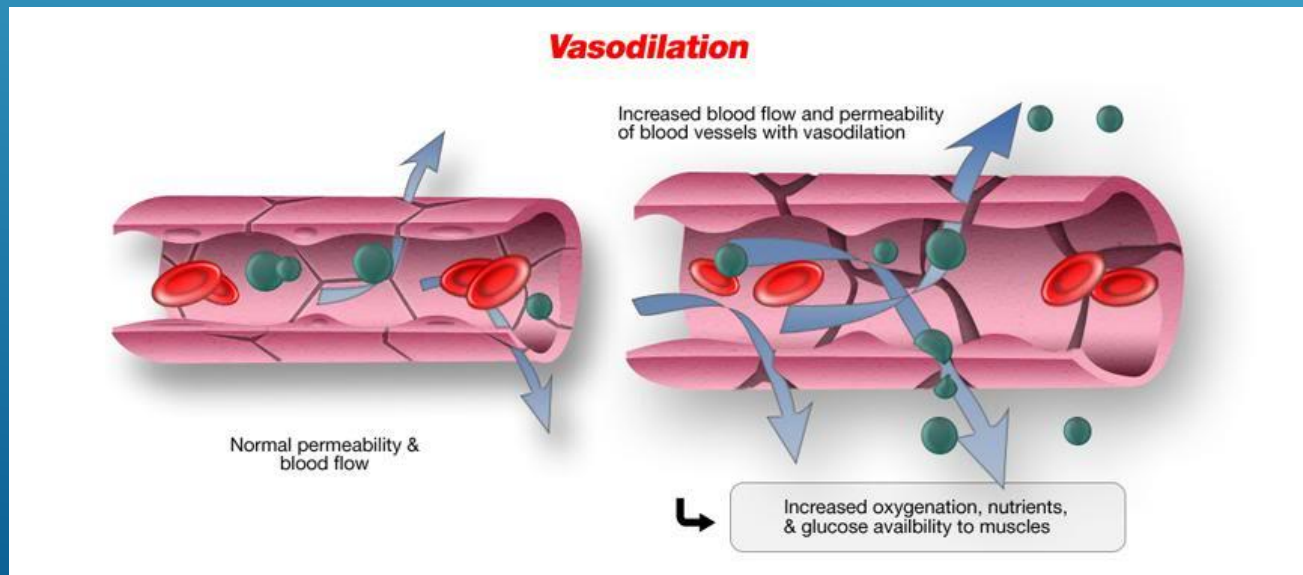
**Aspirin.** Aspirin reduces the ability of your blood to clot, making it easier for blood to flow through narrowed heart arteries.

**Clot-preventing drugs.** Certain medications, such as Plavix can help prevent blood clots from forming by making your blood platelets less likely to stick together.

**Beta blockers.** Beta blockers work by blocking the effects of the hormone epinephrine, also known as adrenaline. As a result, the heart beats more slowly and with less force, thereby reducing blood pressure. They also help blood vessels relax and open up to improve blood flow.

**Statins.** Statins are drugs used to lower blood cholesterol. They work by blocking a substance your body needs to make cholesterol. They may also help your body reabsorb cholesterol that has accumulated in plaques in your artery walls, helping prevent further blockage in your blood vessels.

**Calcium channel blockers.** Calcium channel blockers relax and widen blood vessels by affecting the muscle cells in the arterial walls

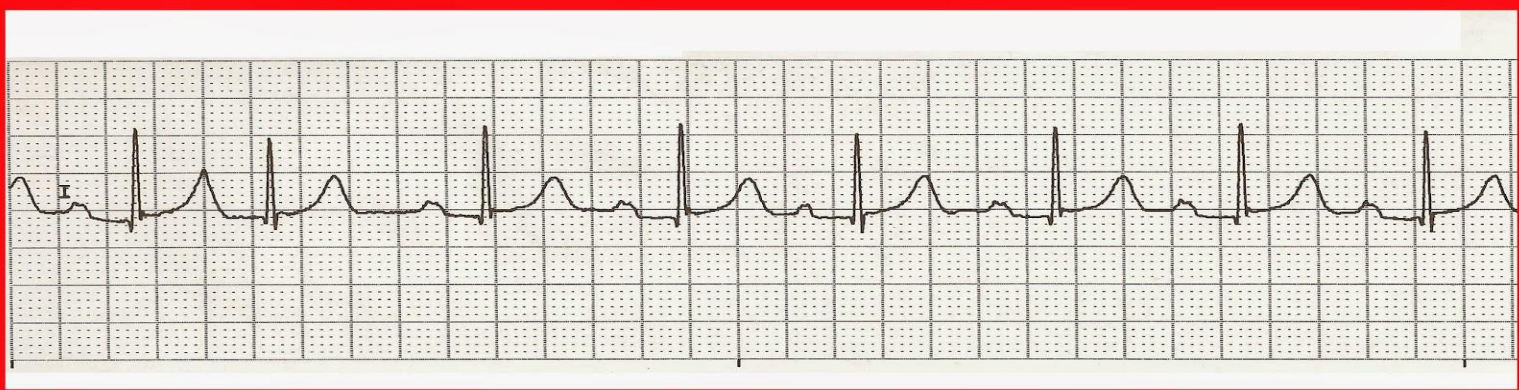




# Tests to Diagnosis Heart Disease

**Besides blood tests and a chest X-ray, tests to diagnose heart disease can include:**

1. Electrocardiogram (ECG)
2. Holter monitoring
3. Echocardiogram
4. Cardiac catheterization
5. Cardiac computerized tomography (CT) scan
6. Cardiac magnetic resonance imaging (MRI)



# 911....why?

40% of the 1.1 million heart attacks that occur annually in the U.S. are fatal. That's about 460,000 deaths from heart attack. Many more patients who survive their heart attacks do so with chronically damaged hearts.



**Call 911 period...do not call a friend or the cardiology clinic or this gym!**

Calling 911 is almost always the fastest way to get lifesaving treatment. Emergency medical services (EMS) staff can begin treatment when they reach you. They are trained to revive someone whose heart has stopped. Also, you're likelier to get treated faster at the hospital if you arrive by ambulance.



Be good to your heart...it's the only one  
you have .....

Questions???

