

# **Women and Coronary Artery Disease**

## **Aren't Women Just Like Men?**

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**Wed Feb 1, 2017**

# Disclosure Of Relationships

Anita Wokhlu, MD

- *Speaker has no relationships to disclose*

# Questions that'll be Answered

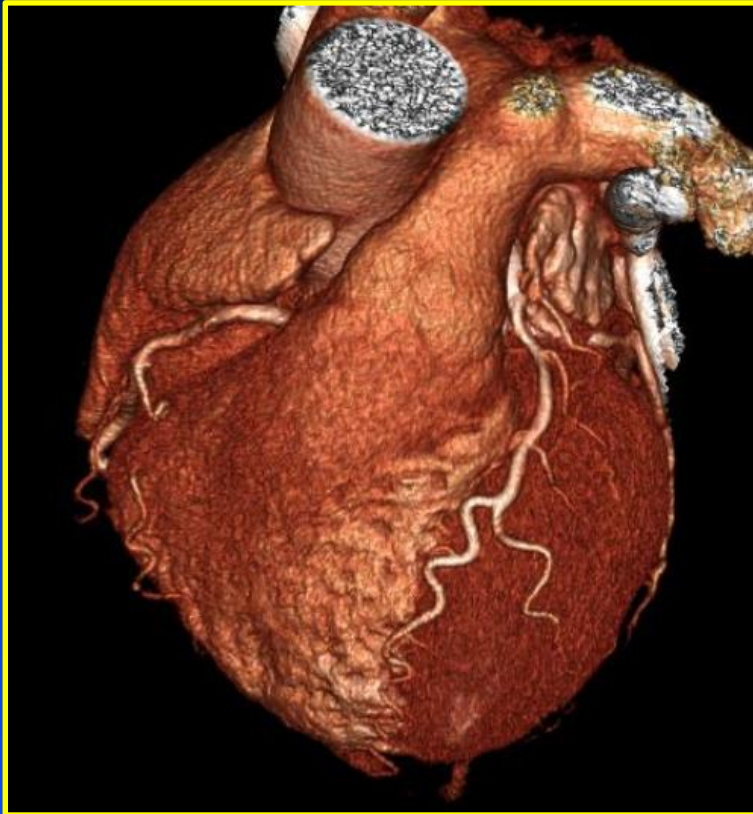
- **What is CAD?**
- **What is the Risk of CAD in Women?**
- **How Does It Present in Women?**
- **What do if I am having a heart attack?**
- **Are Heart Attacks Different in Women?**
- **How do I Prevent CAD and Heart Attacks?**

# **What is Coronary Artery Disease?**

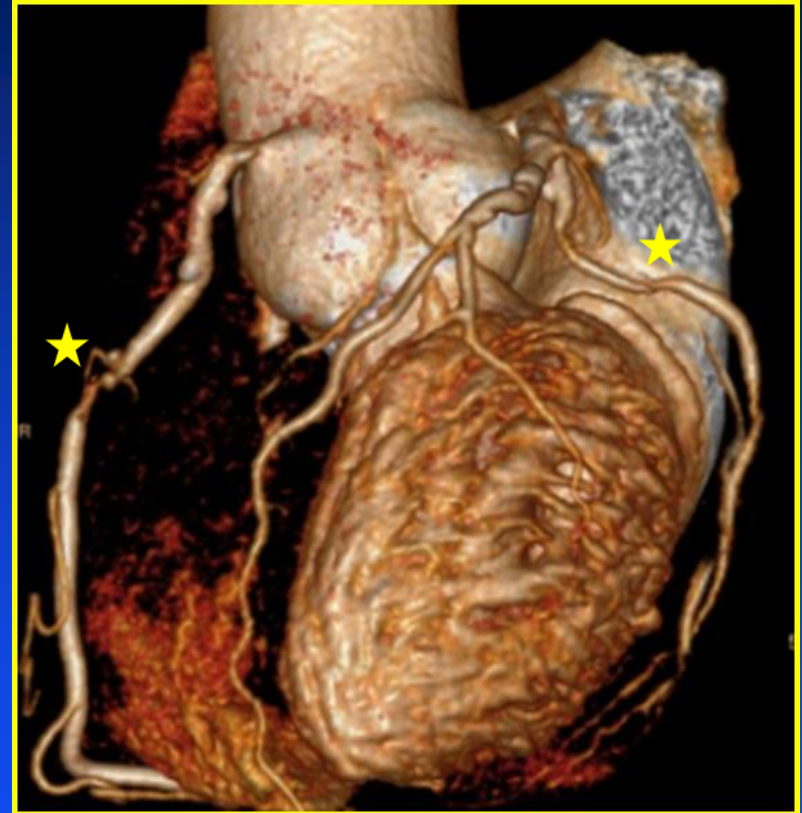
# Coronaries Arteries

## A 3-D View by Cardiac CTA

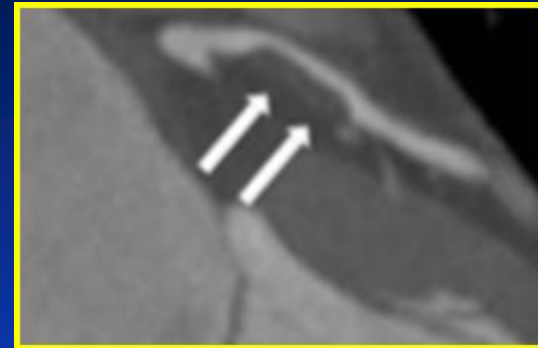
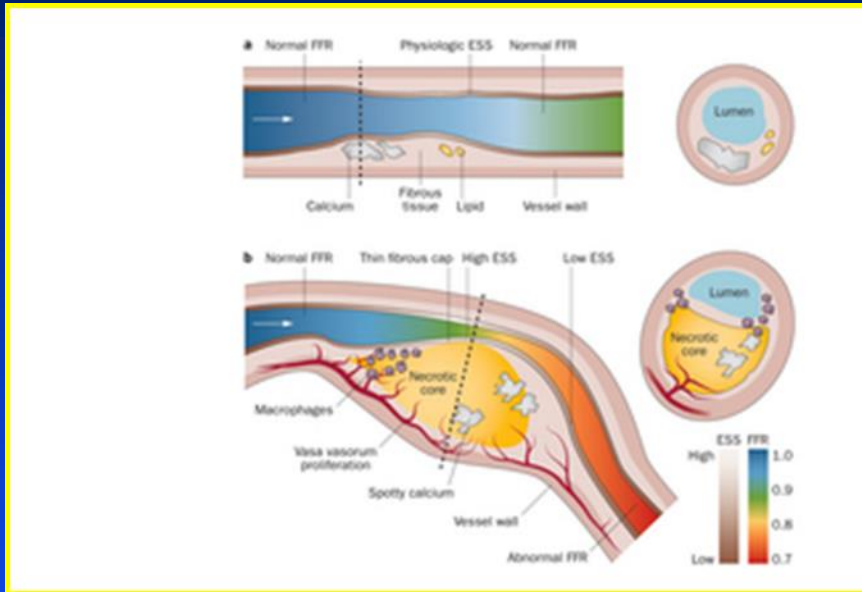
Normal Coronary Arteries



Coronary Artery Disease



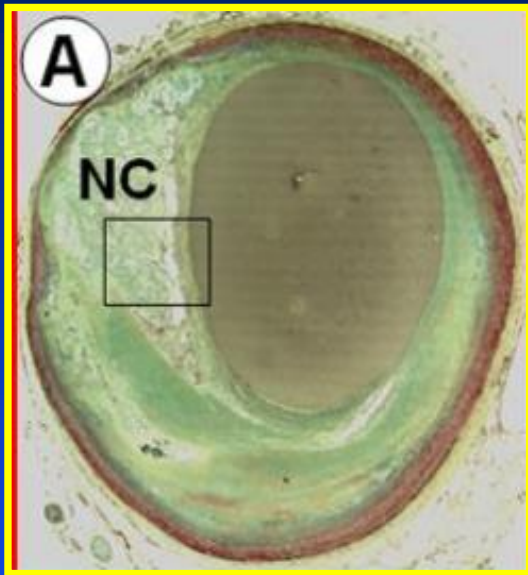
# Atherosclerosis



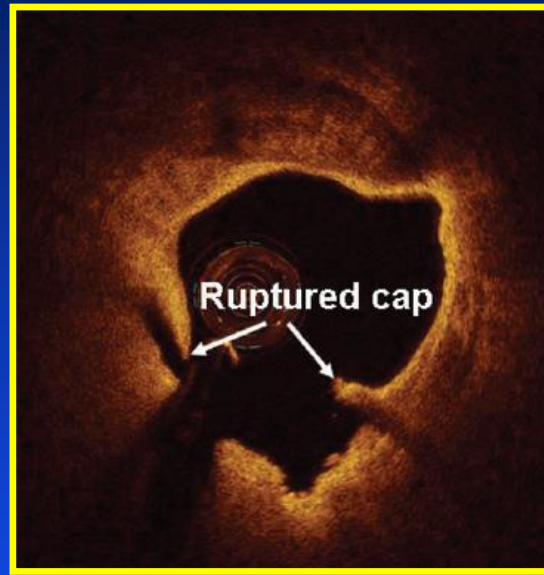
# Acute Coronary Syndrome (ACS)

## Below is one type of MI

### Vulnerable Plaque Rupture



Histological  
Cross-Section



Optical Coherence  
Tomography



Gross  
Pathology

# Test Your Knowledge

## True or False?

- In the last 20 years, more women died of heart disease than men
- More women die of heart disease than breast cancer, but overall more women die from all cancers combined
- Women with ACS have exactly the same pathophysiology as men; their symptoms are just different
- Most women who die suddenly from a heart attack have prior symptoms weeks ahead of time
- Pre-eclampsia in women portends no long-term CV risk



# Most Recent AHA Scientific Statement 2016

## AHA Scientific Statement

### Acute Myocardial Infarction in Women A Scientific Statement From the American Heart Association

Laxmi S. Mehta, MD, FAHA, Chair; Theresa M. Beckie, PhD, FAHA, Co-Chair;  
Holli A. DeVon, PhD, RN, FAHA; Cindy L. Grines, MD; Harlan M. Krumholz, MD, SM, FAHA;  
Michelle N. Johnson, MD, MPH; Kathryn J. Lindley, MD; Viola Vaccarino, MD, PhD, FAHA;  
Tracy Y. Wang, MD, MHS, MSc, FAHA; Karol E. Watson, MD, PhD;  
Nanette K. Wenger, MD, FAHA; on behalf of the American Heart Association Cardiovascular  
Disease in Women and Special Populations Committee of the Council on Clinical Cardiology,  
Council on Epidemiology and Prevention, Council on Cardiovascular and Stroke Nursing,  
and Council on Quality of Care and Outcomes Research

**Abstract**—Cardiovascular disease is the leading cause of mortality in American women. Since 1984, the annual cardiovascular disease mortality rate has remained greater for women than men; however, over the last decade, there have been marked reductions in cardiovascular disease mortality in women. The dramatic decline in mortality rates for women is attributed partly to an increase in awareness, a greater focus on women and cardiovascular disease risk, and the increased application of evidence-based treatments for established coronary heart disease. This is the first scientific statement from the American Heart Association on acute myocardial infarction in women. Sex-specific differences exist in the presentation, pathophysiological mechanisms, and outcomes in patients with acute myocardial infarction. This statement provides a comprehensive review of the current evidence of the clinical presentation, pathophysiology, treatment, and outcomes of women with acute myocardial infarction. (*Circulation*. 2016;133:00-00. DOI: 10.1161/CIR.0000000000000351.)

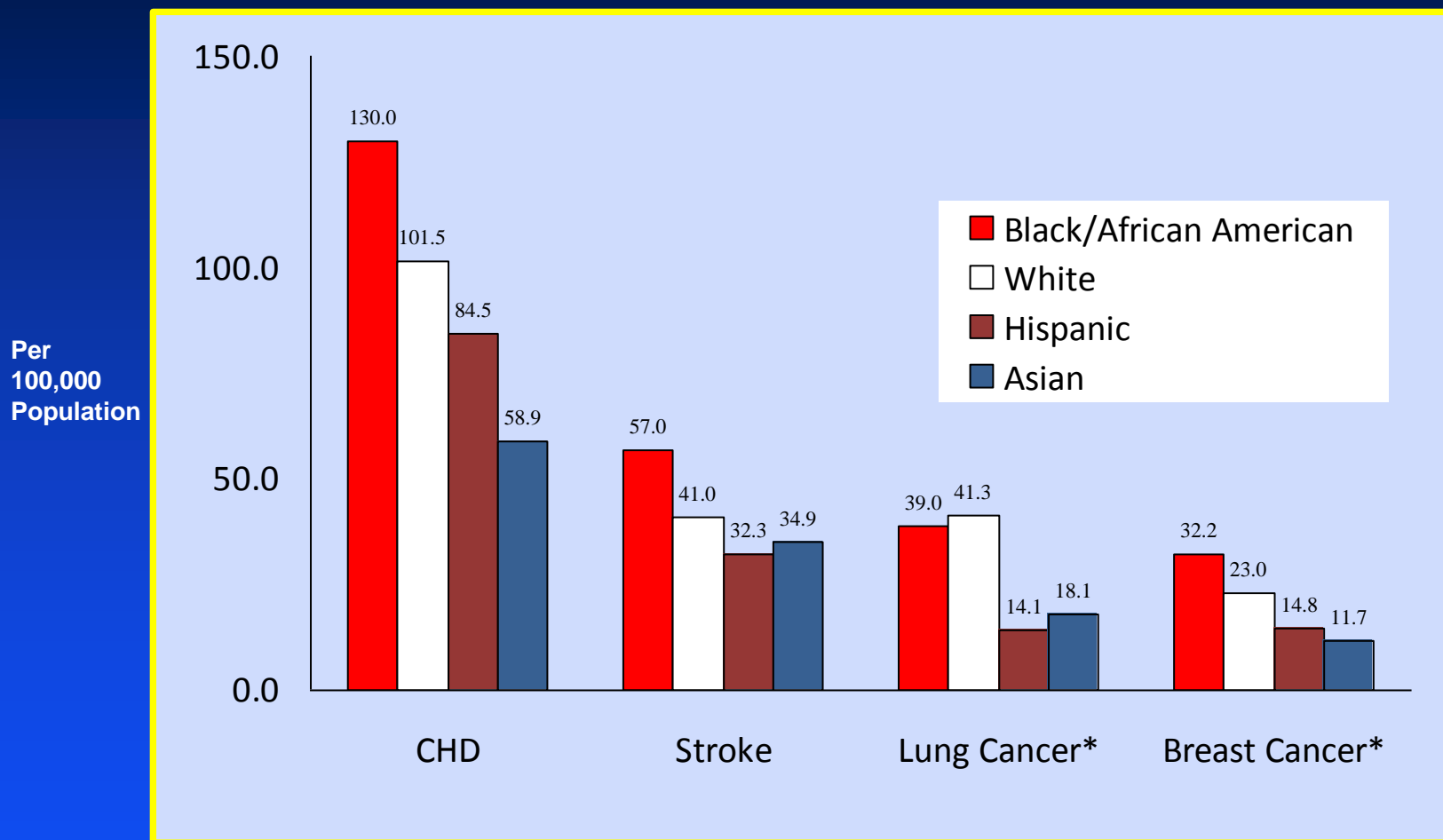
# Test Your Knowledge

## Only 1 is True

- In the last 20 years, more women died of heart disease than men T
- More women die of heart disease than breast cancer, but overall more women die from all cancers combined F
- Women with ACS have exactly the same pathophysiology as men; their symptoms are just different F
- Most women who die suddenly from a heart attack have prior symptoms weeks ahead of time F
- Pre-eclampsia in pregnancy portends no long-term CV risk F

**What is the Risk of CAD in Women?  
(Compared to Men and Other Conditions)**

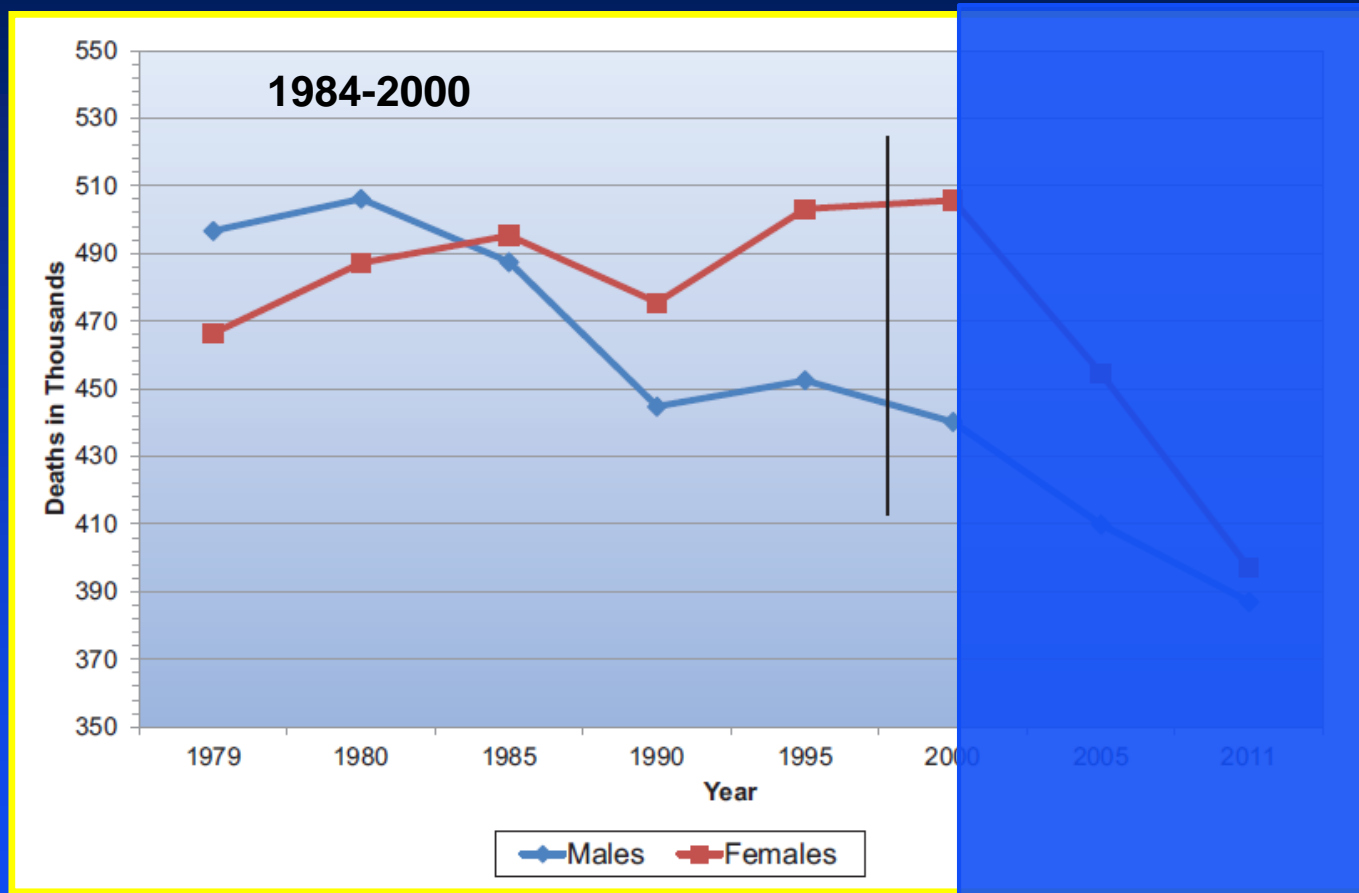
# Heart Disease Strikes More Women Than All Cancers Combined



Sources: Adapted from Lloyd-Jones, Adams, et al (2010).

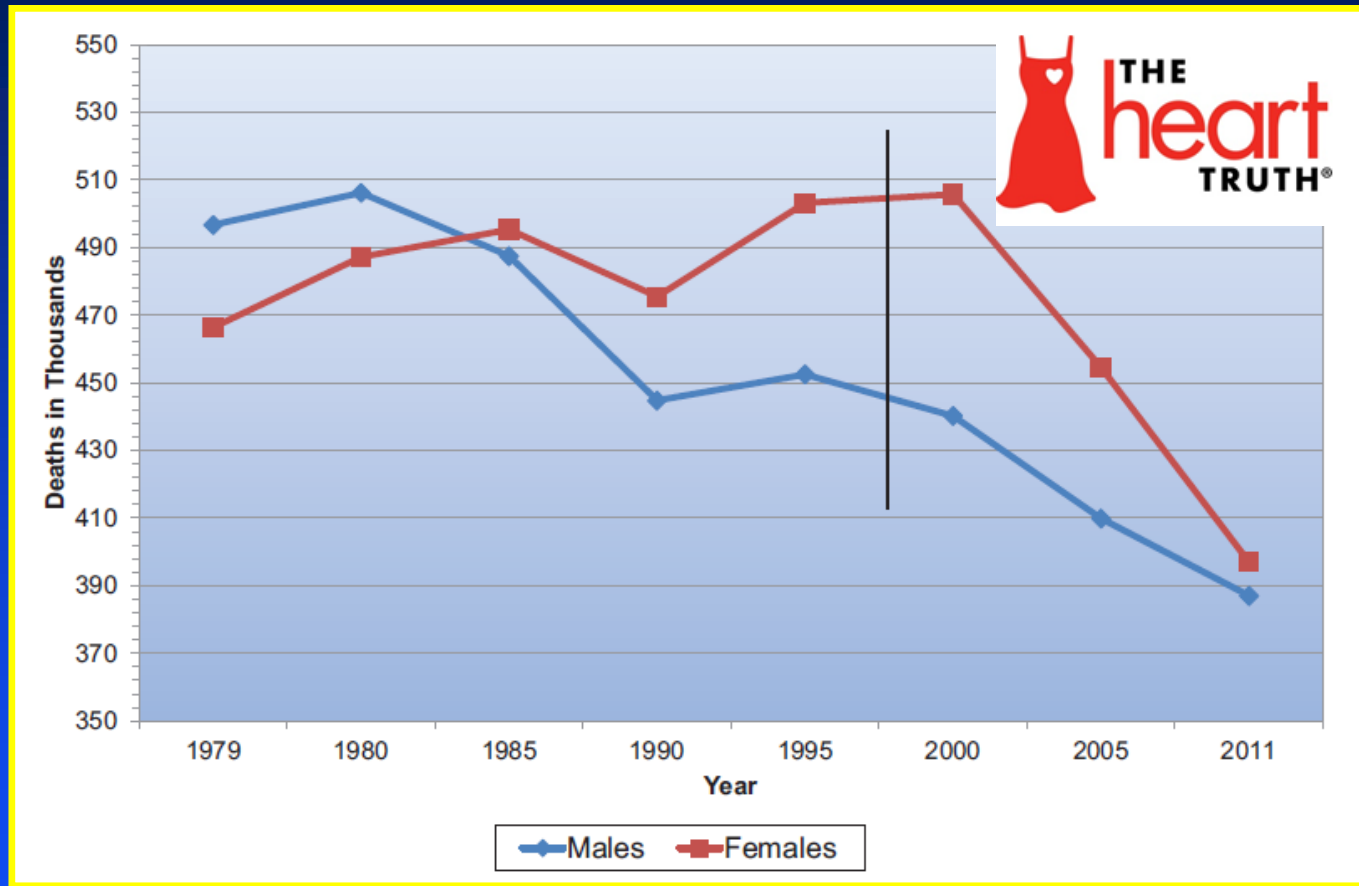
\* Centers for Disease Control and Prevention, National Center for Health Statistics, Health Data Interactive, 2005-2007

# CVD Mortality is Greater in Women than Men Improved Survival in Men but Not Women



# CVD Mortality is Greater in Women than Men

## Go Red Awareness Campaign Has Helped



Within 1 years of the MI, 26% of women die vs.19% of men.  
Within 5 years, 48% of women will have HF, CVA, or death.

**Why do women fare worse?**

**It's complicated.**

# Atypical Symptoms

## An Account of a Missed MI

SundayReview | OPINION

### The Woman's Heart Attack

By MARTHA WEINMAN LEAR SEPT. 26, 2014



Mine went like this: altogether well one moment, vaguely unwell the next; fluttery sensation at the sternum, rising into the throat; mild chest pressure; then chills, sudden nausea, vomiting, some diarrhea. No high drama, just a mixed bag of somethings that added up to nothing you could name. Maybe flu, maybe a bad mussel, maybe too much wine, but the chest pressure caused me to say to my second husband, "Could this be a heart attack?" "Of course not," he said. "It's a

stomach bug."

Still, that pressure, slight but there, nagged at me. I called my doctor and reported my symptoms. The mention of diarrhea, almost never a presenting symptom in heart attacks, skewed the picture. He said, "It doesn't sound like your heart. I can't say a thousand percent that it's not, but it doesn't seem necessary to go racing to the emergency room with the way you feel now. Just see it through and come in for an EKG in the morning."

The pressure eased. I slept, and woke the next morning feeling well. I went for the test mainly because I had said that I would, fully expecting to be told that I was healthy. First the EKG and then the echocardiogram told a different story: a substantial heart attack, "less than massive," my doctor said, "but more than mild." We were both stunned.

- Wife: "Could this be a heart attack?"
- Husband: "Of course not, it's a stomach bug."
- MD: "It doesn't seem necessary to go racing to the ER"



# **How Does CAD Present in Women?**

# Typical vs Atypical Symptoms

## What does We Mean?

Typical Symptoms	Atypical Symptoms
Chest pain/discomfort (pressure, tightness, squeezing)	Chest pain: sharp, pleuritic, burning, aching, soreness, reproducible
Additional symptoms with chest pain	Other symptoms excluding chest pain
Radiation of pain to jaw, neck, shoulders, arm, back, epigastrium	Unusual fatigue
Associated symptoms: dyspnea, nausea, vomiting, lightheadedness, diaphoresis	Unusual shortness of breath
	Upper back/chest pain
	Neck, jaw, arm, shoulder, back, epigastric pain
	Flu-like symptoms
	Dizziness
	Generalized scared/anxiety feeling
	Generalized weakness
	Indigestion
	Palpitations

AMI indicates acute myocardial infarction.

# ACS Can Occur without CP In Women and Men

**Table 1. Acute Coronary Syndrome Presentation Without Chest Pain or Discomfort According to Sex—Summary of Studies From Large Cohorts**

Source	Study Characteristic							Proportion Without Chest Pain, %		
	Study Description	Patient Population	Study Years	Sample Size	Mean Age, y	Age Adjusted	Race Adjusted	Men	Women	All
Brieger et al, <sup>37</sup> 2004	GRACE Registry	ACS	1999-2002	20 881	65.8	Yes	No	7.3	10.6	8.4
Canto et al, <sup>8</sup> 2000	National MI Registry	MI	1994-1998	434 877	69.3	Yes	Yes	28.6	38.6	32.7
Canto et al, <sup>38</sup> 2002	Alabama UA Registry	UA	1993-1999	4167	72.3	Yes	Yes	50.2	53.0	51.7
Culi et al, <sup>39</sup> 2002	CCUs Croatia	MI	1990-1995	1996	58.8	Yes	No	12.4	20.3	14.8
Dorsch et al, <sup>7</sup> 2001	United Kingdom	MI	1995	2096	70.6	Yes	No	17.6	24.6	20.1
Goldberg et al, <sup>40</sup> 1998	Worcester MI Study	MI	1986-1988	1360	67.7	Yes	No	18.0	23.0	20.0
Milner et al, <sup>41</sup> 2004	Worcester MI Study	MI	1997-1999	2073	70.2	Yes	No	30.9	45.8	37.3
Roger et al, <sup>42</sup> 2000	Olmsted County, Minnesota	UA	1985-1992	2271	63.0	Yes	No	25.0	19.0	22.0
Stern et al, <sup>43</sup> 2004	26 Hospitals, CCU, Israel	ACS	2000	2113	64.9	Yes	No	18.7	29.7	21.7
Cumulative	...	...	...	...	...	...	...	27.4 (76 036 of 276 933)	37.5 (73 003 of 194 797)	31.6 (149 039 of 471 730)

Abbreviations: ACS, acute coronary syndrome; CCU, coronary care unit; MI, myocardial infarction; UA, unstable angina.

# Awareness Survey in Women 2012 Results

## AHA Special Report

### Fifteen-Year Trends in Awareness of Heart Disease in Women Results of a 2012 American Heart Association National Survey

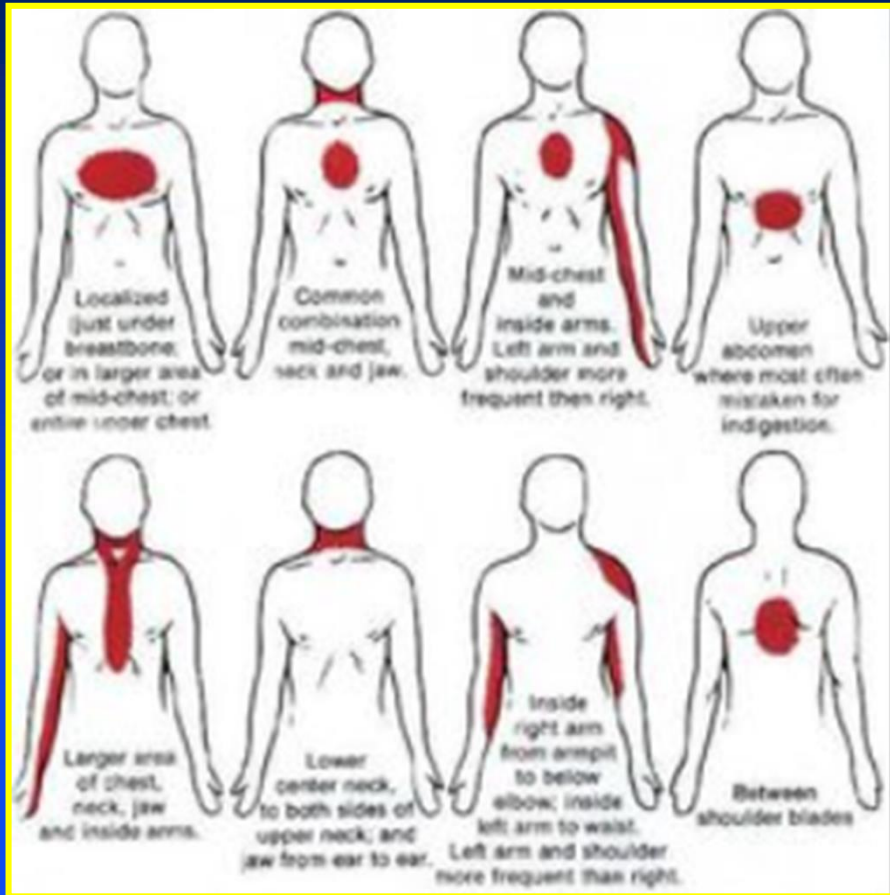
#### WRITING COMMITTEE

Lori Mosca, MD, MPH, PhD, Chair; Gmerice Hammond, MD; Heidi Mochari-Greenberger, PhD, MPH, RD; Amytis Towfighi, MD; Michelle A. Albert, MD, MPH; on behalf of the American Heart Association Cardiovascular Disease and Stroke in Women and Special Populations Committee of the Council on Clinical Cardiology, Council on Epidemiology and Prevention, Council on Cardiovascular Nursing, Council on High Blood Pressure Research, and Council on Nutrition, Physical Activity and Metabolism

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# Educate Your Patients To Recognize these Symptoms



**Table 4. (Unaided) Awareness of Warning Signs of Heart Attack in 2012 Compared With 1997**

Response (Unaided)	Survey Year	
	1997	2012
What warning signs would you associate with having a heart attack?		
Chest pain	67	56*
Fatigue	8	10
Nausea	10	18*
Pain that spreads to shoulders, neck, or arm	NA	60
Shortness of breath	33	38*
Tightness of the chest	15	17

# Test Your Knowledge

If you thought you were experiencing a heart attack, what is the first thing you would do?

- A) Call 911
- B) Take an aspirin
- C) Go to the hospital
- D) Call a family member
- E) Call a Doctor

# “Delay in Presentation” to Hospital Median Delay Time 2 to 5 Hours

- Only 65% of women would call 911 first if they thought they were experiencing symptoms of a heart attack
- But >80% would call 911 for a friend

Table 5. (Unaided) Responses to Signs of a Heart Attack in 2012 by Racial/Ethnic Group

Response (Unaided)	Overall, 2012	Racial/Ethnic Group		
		White (a)	Black (b)	Hispanic (c)
If you thought you were experiencing signs of a heart attack, what is the first thing you would do?				
Call 9-1-1	65	63	65	73
Take an aspirin	20	22 <sup>c</sup>	18 <sup>c</sup>	10
Go to the hospital	5	5	8	4
Call a family member	4	4	2	4
Call your doctor	2	1	1	5 <sup>a</sup>
If you thought someone else was experiencing signs of a heart attack, what is the first thing you would do?				
Call 9-1-1	81	80	78	87
Advise him/her to take an aspirin	11	13 <sup>c,d</sup>	11	6
Take him/her to the hospital	1	1	3	2
Tell him/her to call the doctor	1	—	—	2 <sup>a</sup>
Call his/her spouse or family member	—	...	—	...

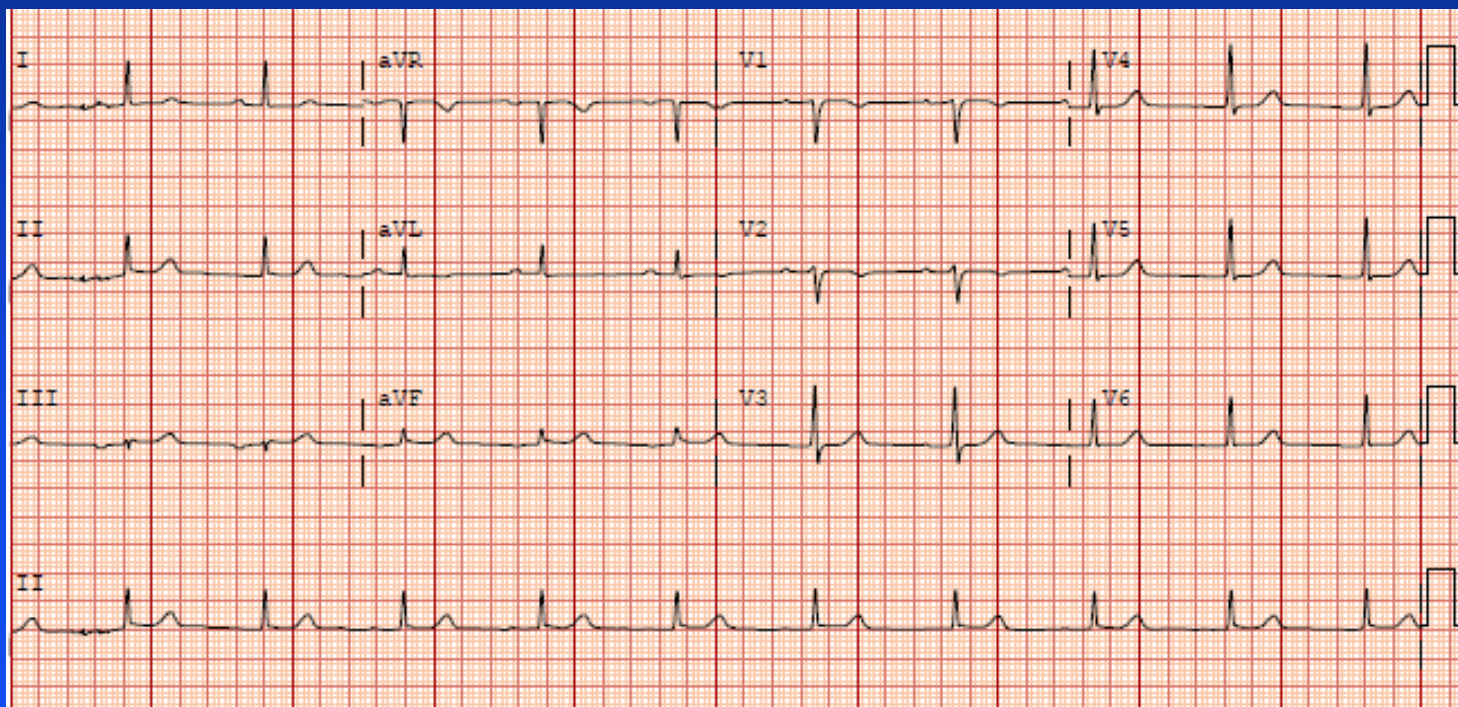
All values are weighted percentages among telephone respondents.

Letters denote significant differences in columns for racial/ethnic and age groups at  $P < 0.05$ .

Dash indicates small base sample <100; ..., empty cell

# CASE 1: 54 yo woman with accelerated angina DM, HTN, and she has a EP cardiologist

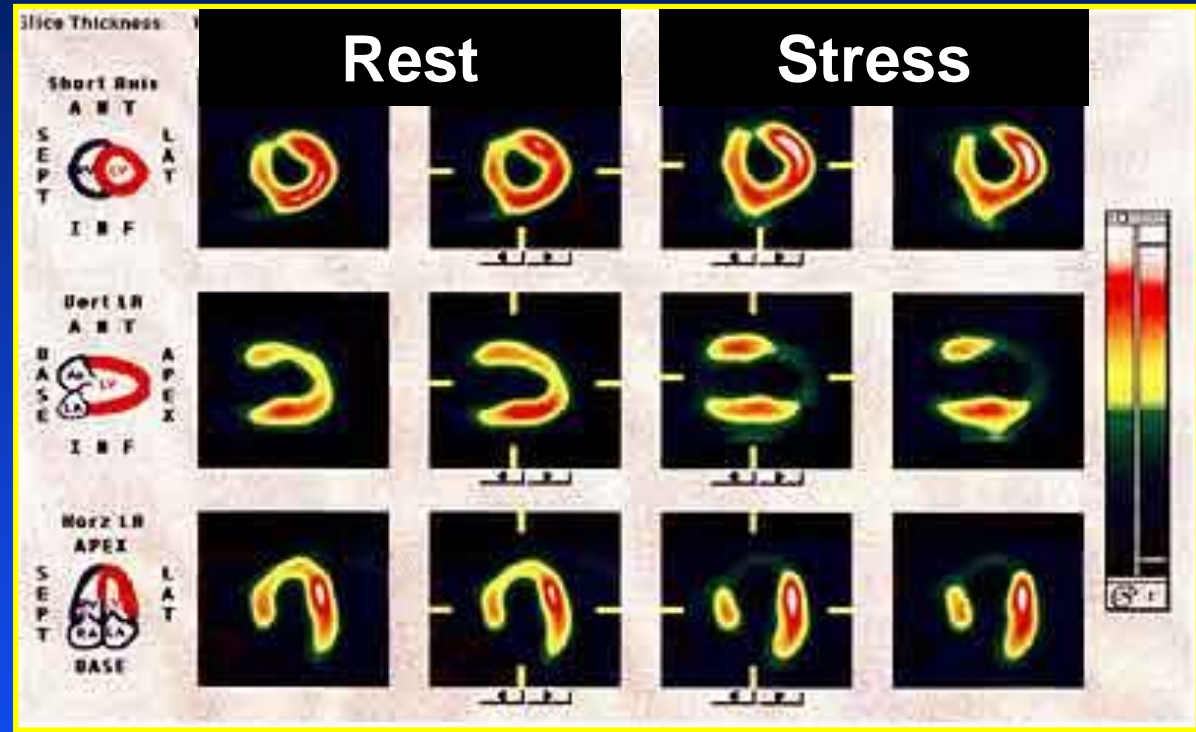
“patient thru to nurse complaining of chest pain. Spoke with patient. Stated has had chest pain for 3-4 weeks, with chest pressure and nausea. Instructed patient that she needs to go to ER to be evaluated. Stated she not going to ER....”



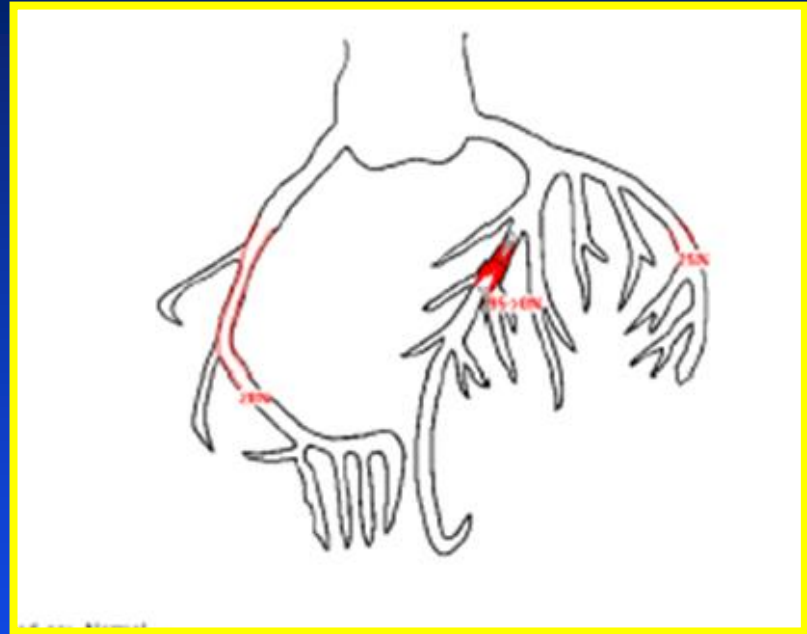
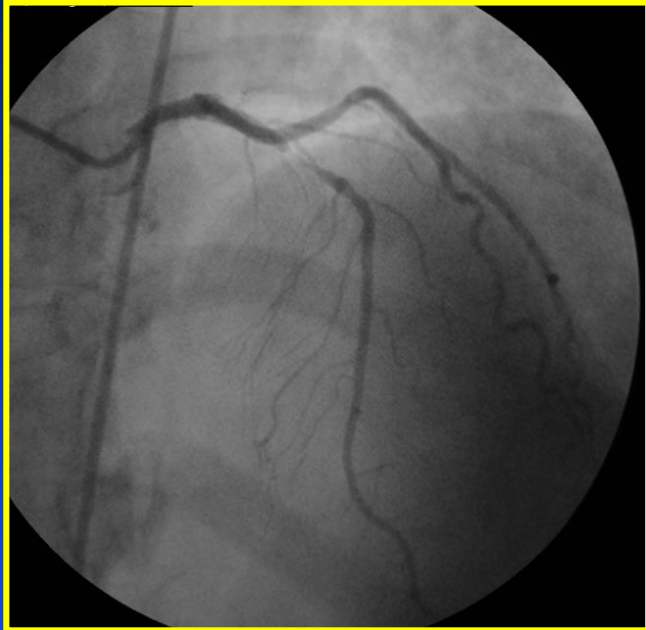


# Case 1: Abnormal Stress Test

- **MPS: Moderate to severe defect consistent with reversible myocardial ischemia in the anterior, antero-apical and septal walls. SSS 14 SRS 3 SDS 11**



# Case 1: Proximal LAD 95%



# Delay in Diagnosis

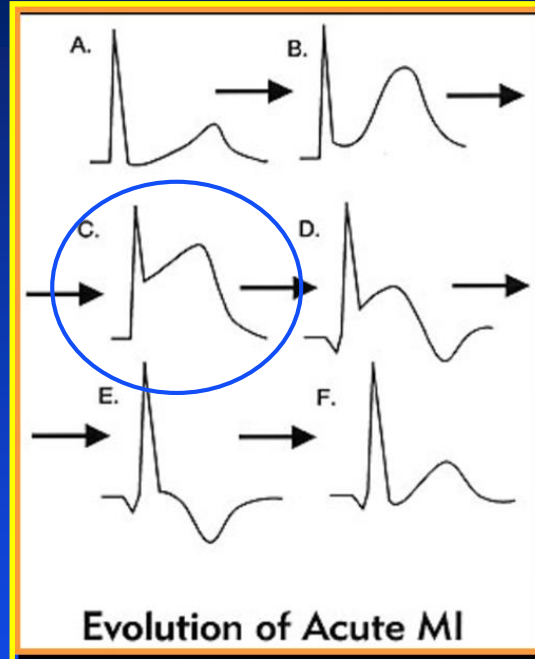
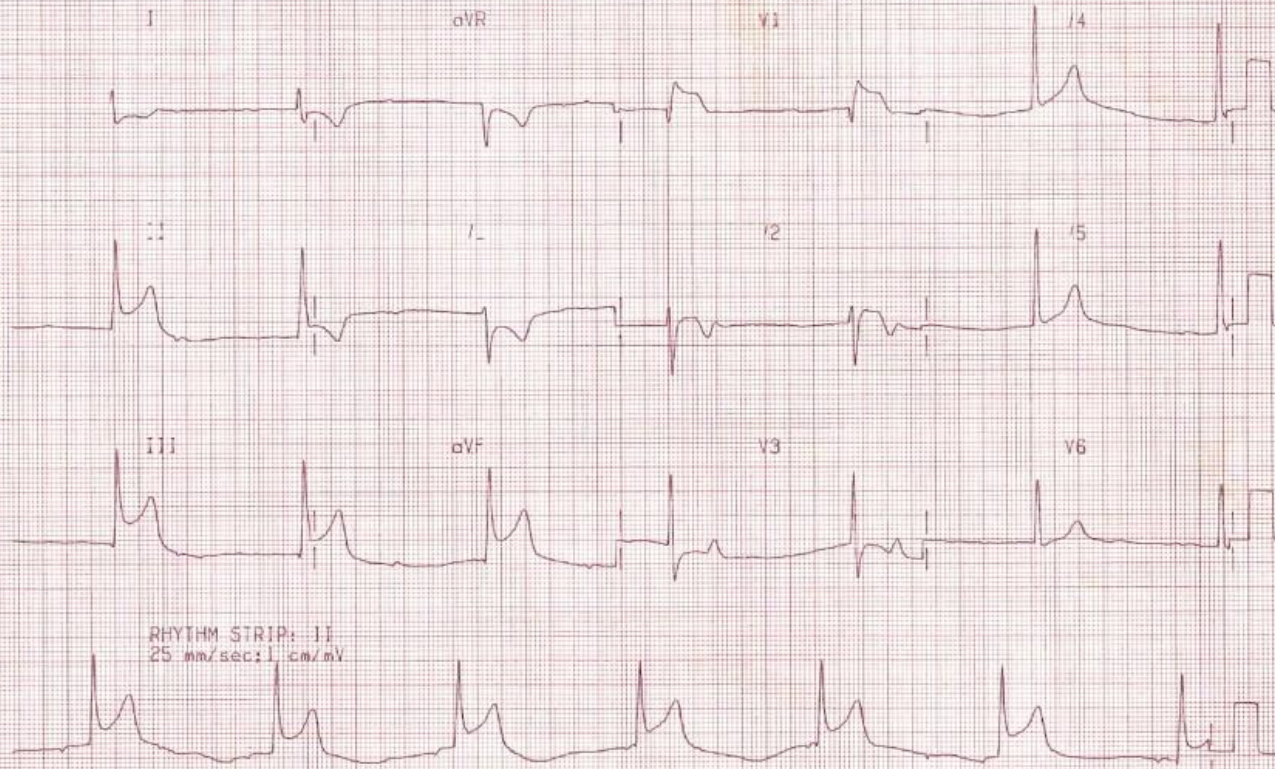
- **In 2000, one NEJM study revealed that women under the age of 55 were SEVEN TIMES more likely to be misdiagnosed and sent home from the E.R. in mid-heart attack compared to their male counterparts**
- **In a recent study, the high sensitivity troponin I assay noticeably increased the diagnosis of myocardial infarction in women**

# **Are Heart Attacks Different in Women?**

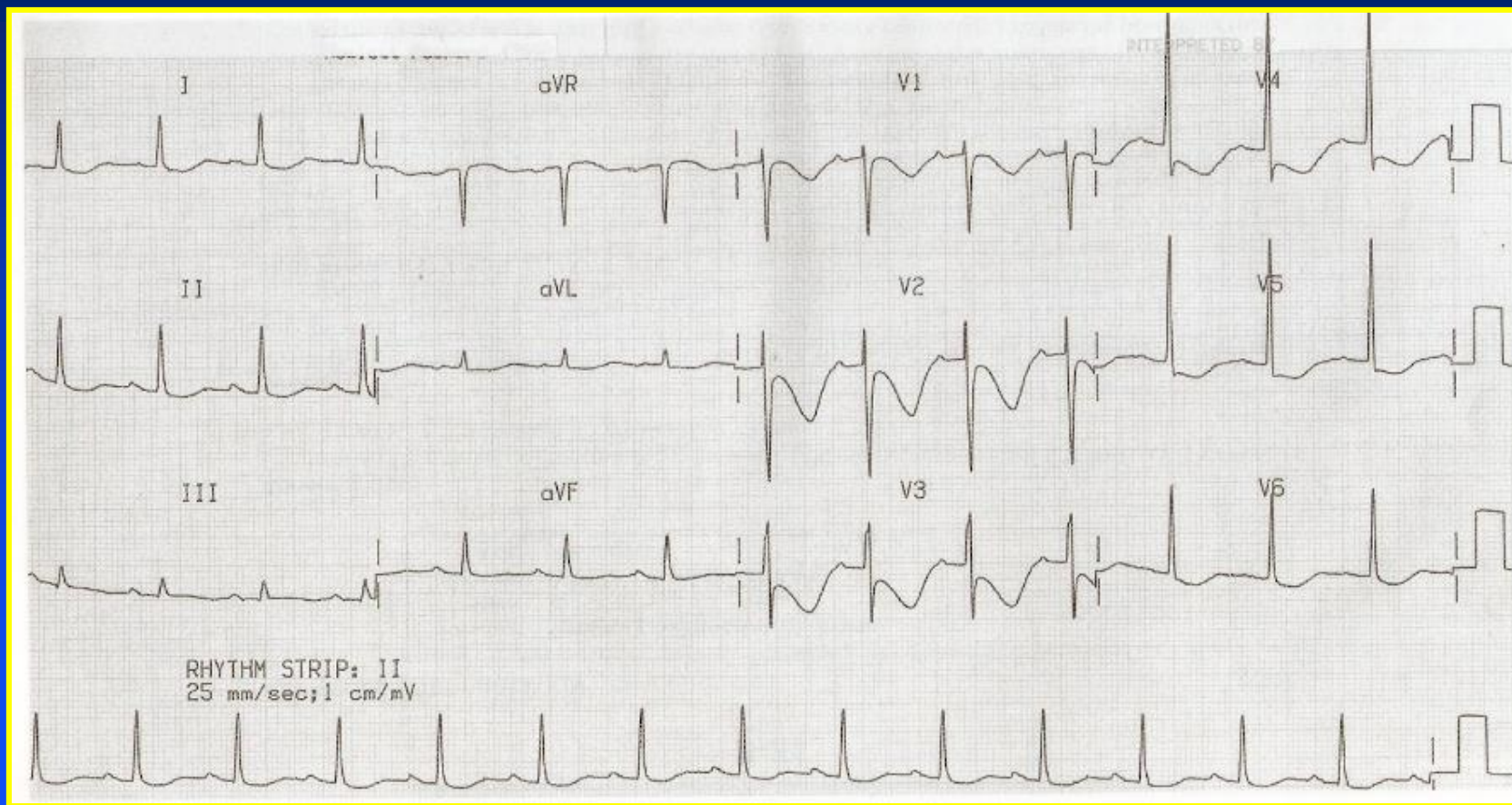
**Kinda**

# Sometimes It's a Clear STEMI

## Inferior STE

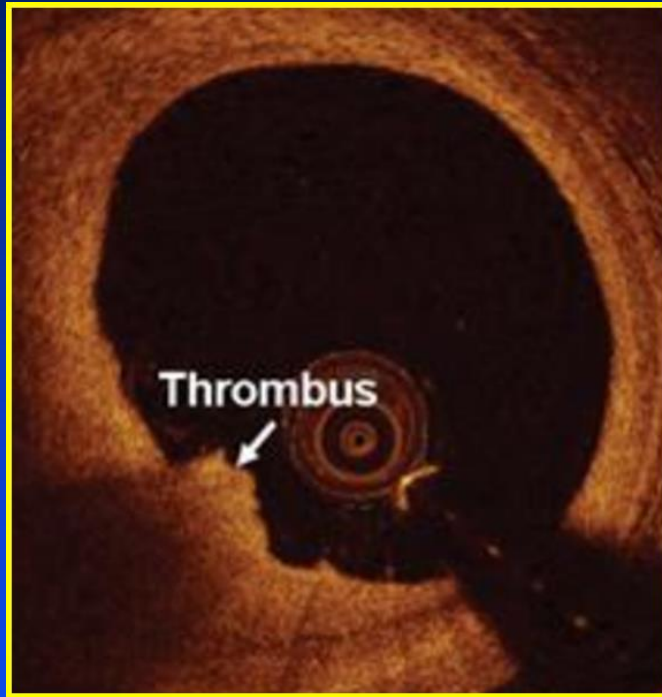


# 88 yo woman c/o “Weakness” NSTEMI w/very abnormal EKG but the symptoms are atypical

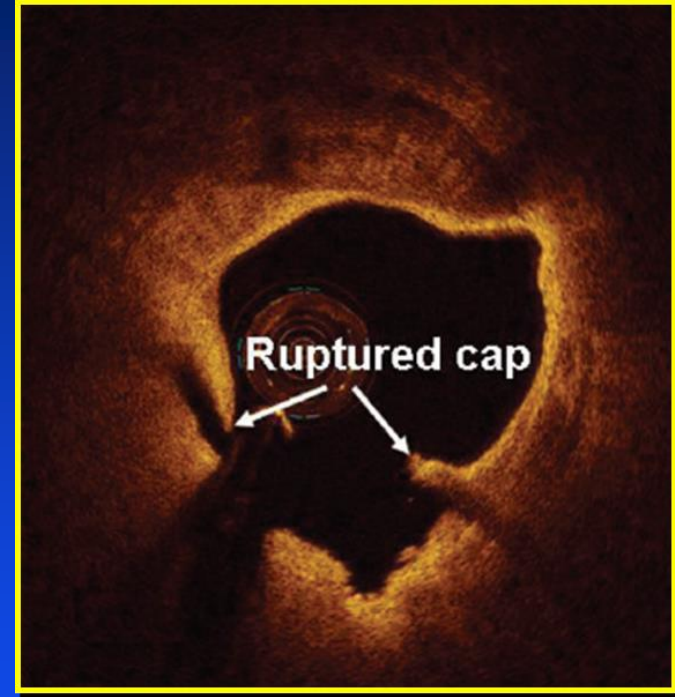


# Male vs. Female Heart Attacks Patterns Explained by Pathophysiology

Plaque Erosion



Plaque Rupture

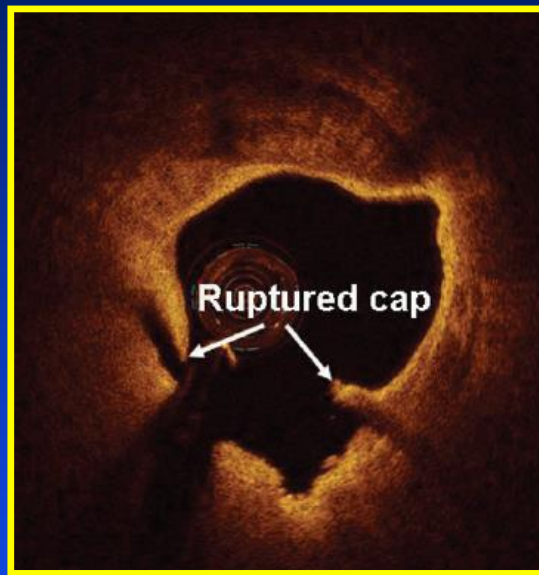
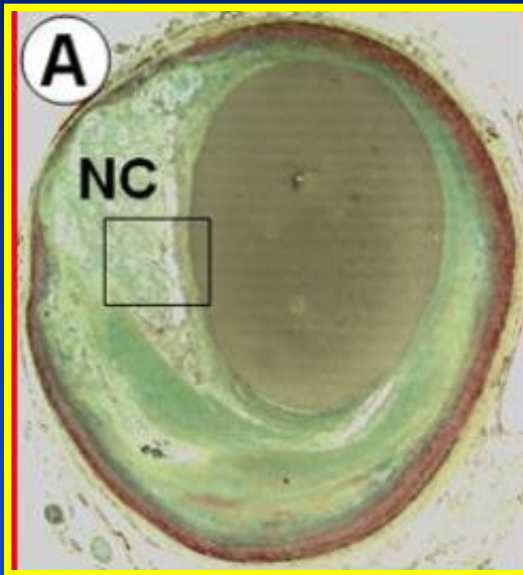


**Women erode. Men explode.**

**Noel Bairey Merz MD, TED Talk**

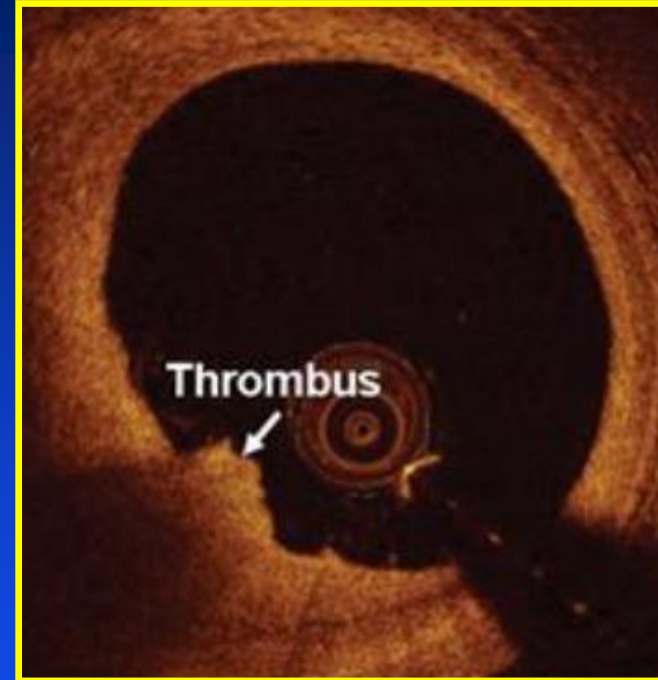
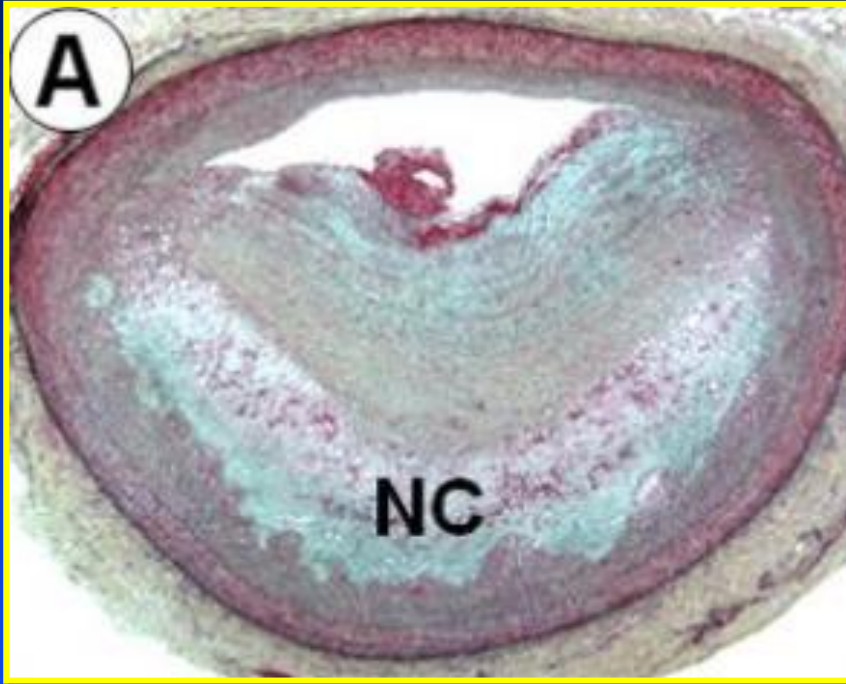
# Plaque Rupture More often In Men

Plaque Rupture





# Plaque Erosion More Often in Women

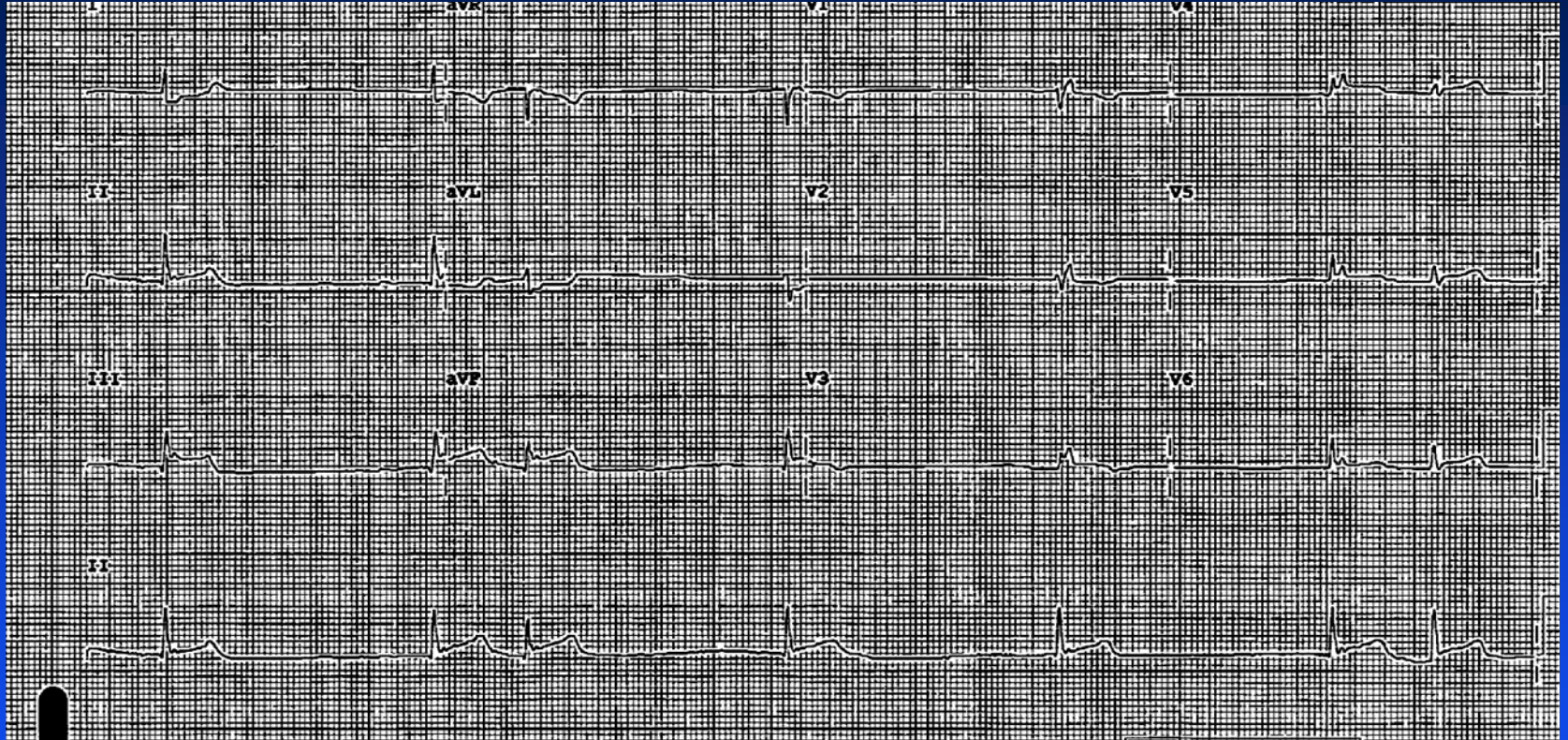


# **Varied Mechanisms of Infarct and Ischemia in Women**

- **Plaque Rupture**
- **Plaque Erosion**
- **Coronary artery Spasm**
- **Coronary Dissection**
- **Microvascular Disease**

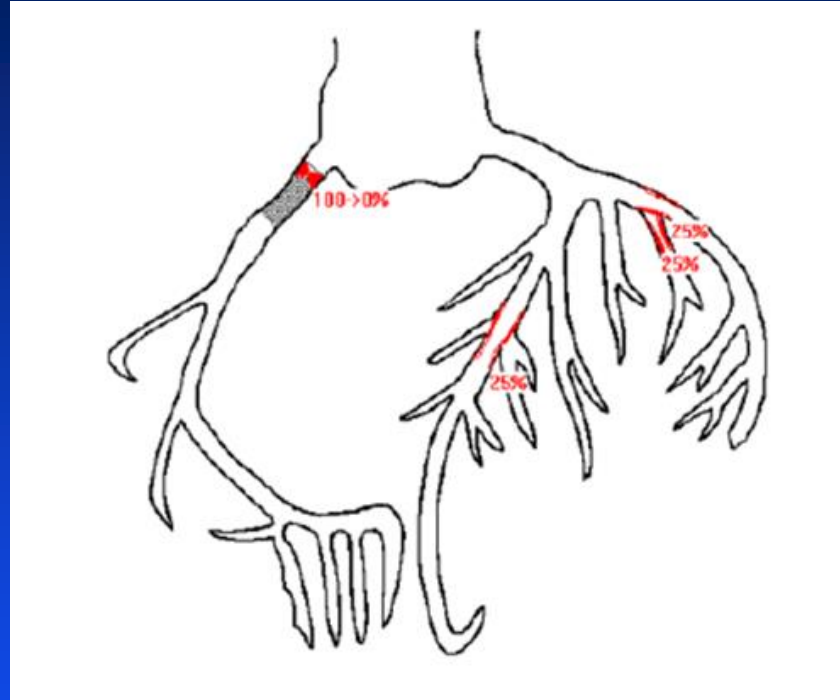
**Women who suffer from MI w/  
atypical presentations,  
and different pathophysiologies  
may ultimately go underdiagnosed  
and undertreated**

# CASE 2: 74 yo woman w/ CP X 1 hour after radiology test



# CASE 2: 77 yo woman w/STEMI

## Ostial RCA disease after CPR/arrest



- Pt underwent CPR, temporary pacing, PCI to ostial RCA, IABP and dopa ggt

# Management of MI Similar but Complication Rates Differ

- Overall management strategies are the same in women and men
- But women tend to have higher complication rates with thrombolytics, CABG, or antiplatelet agents.

# What's the argument for primary prevention?

Half of the time heart disease strikes in women and men, it presents as **Sudden Cardiac Death**

# What's the argument for primary prevention?

**1 in 4** women will die from heart disease. Many more affected by heart disease.



**How Do I Prevent CAD and  
Heart Attacks?  
Know Your Risk**

# Meet Diane

## What is Her Risk for Heart Attack in the Next 10 Years?

- Diane is 59 year old
- She is 5'3", 145 lbs, waist 35.5 inches
- BP 120/85
- She smoked 10 years ago
- She is diabetic but doesn't need insulin
- Her fasting glucose is 90
- TC 200 HDL 45 LDL is 110, TG's are OK
- Dad had heart attack when he was old

# What is Her Risk for Heart Attack in the Next 10 Years?

- a) Very Low Risk <5%**
- b) Low to Intermediate Risk 5-20%**
- c) High Risk >20%**

# Risk Calculator and Advice

## www.heart.org

https://www.heart.org/gglRisk/main\_en\_US.html

Heart Attack Risk Calculator

[Register](#) | [Log In](#)

American Heart Association | American Stroke Association

### Heart Attack Risk Calculator Overview

Step 1 Step 2 Step 3 Step 4

Answer the questionnaire to estimate your risk of having a heart attack or dying from coronary heart disease over the next 10 years.

**1**

**Questions 1 to 4**

- Men have a greater risk of heart attack than women.  
The risk of heart disease rises significantly for both men and women around middle age.  
[More information about gender and age](#)
- Smoking is a major risk factor for heart disease for both men and women.  
[More information about smoking](#)

1. GENDER  
What is your gender?

2. AGE  
What is your age?  years  
Enter a number between 20 and 79 into the box.

3. SMOKING  
Are you a smoker?

Answer "Yes" if you have smoked cigarettes within the past month.

4. FAMILY HISTORY OF HEART DISEASE  
Has anyone in your immediate family been diagnosed with early heart disease?

"Immediate family" is a blood-related parent, brother, sister or child.  
"Early heart disease" is being diagnosed with heart disease before age 55 (for male relatives) or 65 (for female relatives).

You can register or log in at any time.

- [More information about the calculator goals](#)
- [What you need to know to use this calculator](#)
- [What are the benefits of registering?](#)
- [AHA Privacy Policy](#)
- [Terms and Conditions](#)
- [Informed Consent](#)

Click the "Next" button to continue.

# Heart.org

## Screen 1: Age and Gender Matter

### Questions 1 to 4

- Men have a greater risk of heart attack than women.

The risk of heart disease rises significantly for both men and women around middle age.

[More information about gender and age](#)

- Smoking is a major risk factor for heart disease for both men and women.

[More information about smoking](#)

If you are updating a previous assessment, please check each answer for accuracy.

#### 1. GENDER

What is your **gender**?

Female

#### 2. AGE

What is your **age**?

59

years

*Enter a number between 20 and 79 into the box.*

#### 3. SMOKING

Are you a **smoker**?

No

Answer "Yes" if you have smoked cigarettes within the past month.

#### 4. FAMILY HISTORY OF HEART DISEASE

Has anyone in your **immediate family** been diagnosed with **early heart disease**?

No

"Immediate family" is a blood-related parent, brother, sister or child.

"Early heart disease" is being diagnosed with heart disease before age 55 (for male relatives) or 65 (for female relatives).

# Heart.org

## Diabetes matters

### Questions 5 to 7

- **Existing heart or blood vessel disease means higher heart-related health risks.**

[More information about existing heart or blood vessel disease](#)

- **If you have diabetes (or prediabetes), you also have higher heart-related health risks.**

You are said to have "prediabetes" if your fasting blood sugar is between 100 mg/dL and 125 mg/dL.

[More information about diabetes and fasting blood sugar](#)

#### 5. EXISTING HEART OR BLOOD VESSEL DISEASE

Have you had any **atherosclerotic heart or blood vessel disease** events, conditions or procedures?

No 

Answer "Yes" if you have had any of these:

- Transient ischemic attack (TIA)
- Angioplasty or balloon angioplasty
- Coronary artery bypass graft (CABG)
- Peripheral arterial disease
- Surgery for a circulation problem (legs)
- Carotid artery disease
- Stent procedure
- Heart attack
- Angina
- Stroke

#### 6. DIABETES

Have you been diagnosed with **diabetes**?

Yes 

Answer "Yes" if you have either type 1 or type 2 diabetes.

#### 7. FASTING BLOOD SUGAR

Is your **fasting blood sugar** too high (100 mg/dL or higher)?

No 

# Heart.org Screen 3

## Questions 8 to 10

- **Body Mass Index (BMI) compares your weight to your height:**

- *Obese:* 30 or higher
- *Overweight:* 25 to 29.9
- *Normal:* 18.5 to 24.9
- *Underweight:* Below 18.5

[More information about weight](#)

- **Too much fat in your waist area increases your risk of heart and blood vessel disease and diabetes.**

### 8. HEIGHT

What is your **height**?

feet

inches

### 9. WEIGHT

What is your **weight**?

pounds

*Enter a number between 80 and 400 into the box.*

After both your height and weight are entered, your Body Mass Index (BMI) will be calculated and displayed.

**Your Body Mass Index (BMI) is: 25 (Overweight)**

### 10. WAIST MEASUREMENT

Is your waist size **greater than 35 inches** (women) or **40 inches** (men)?

# Heart.org Screen 4

## Questions 11 to 13

- **Systolic blood pressure is the *first or top number* of your blood pressure.**

**Diastolic blood pressure is the *second or bottom number* of your blood pressure.**

Most doctors consider a blood pressure above 180/120 to be dangerously high.

[More information about blood pressure](#)

### 11. SYSTOLIC BLOOD PRESSURE

What is your **systolic blood pressure?**

 mm Hg  


*Type a number between 90 and 230 or adjust the slider.*

### 12. DIASTOLIC BLOOD PRESSURE

What is your **diastolic blood pressure?**

 mm Hg  


*Type a number between 60 and 140 or adjust the slider.*

### 13. TREATMENT FOR HIGH BLOOD PRESSURE

Are you currently being **treated for high blood pressure** with medicine prescribed by your doctor?

 ▼



# Heart.org Screen 5

## Questions 14 to 17

- The higher your total blood cholesterol and LDL (bad) cholesterol, the greater your risk for heart disease.

For HDL (good) cholesterol, the higher the number is, the lower your risk of heart disease.

[More information about cholesterol and triglycerides](#)

### 14. TOTAL CHOLESTEROL

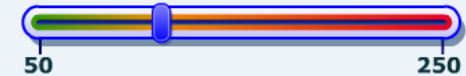
What is your **total cholesterol**?  mg/dL



Type a number between 130 and 320 or adjust the slider.

### 15. LDL CHOLESTEROL

What is your **LDL (bad) cholesterol**?  mg/dL



Type a number between 50 and 250 or adjust the slider.

### 16. HDL CHOLESTEROL

What is your **HDL (good) cholesterol**?  mg/dL



Type a number between 20 and 100 or adjust the slider.

### 17. TRIGLYCERIDES

Are your **triglycerides** 150 mg/dL or higher?

# A2. High Heart Attack Risk Final Risk Assessment

## Your Recommended Goals

Compare your risk factor levels with the recommended goals.



Cholesterol

Blood Pressure

Smoking

Modifiable  
Risk Factors

	CURRENT RISK FACTORS	RISK FACTOR GOALS
Total cholesterol (mg/dL)	200 moderate risk	goal: <200
HDL (good) cholesterol (mg/dL)	45 borderline high risk	goal: ≥50

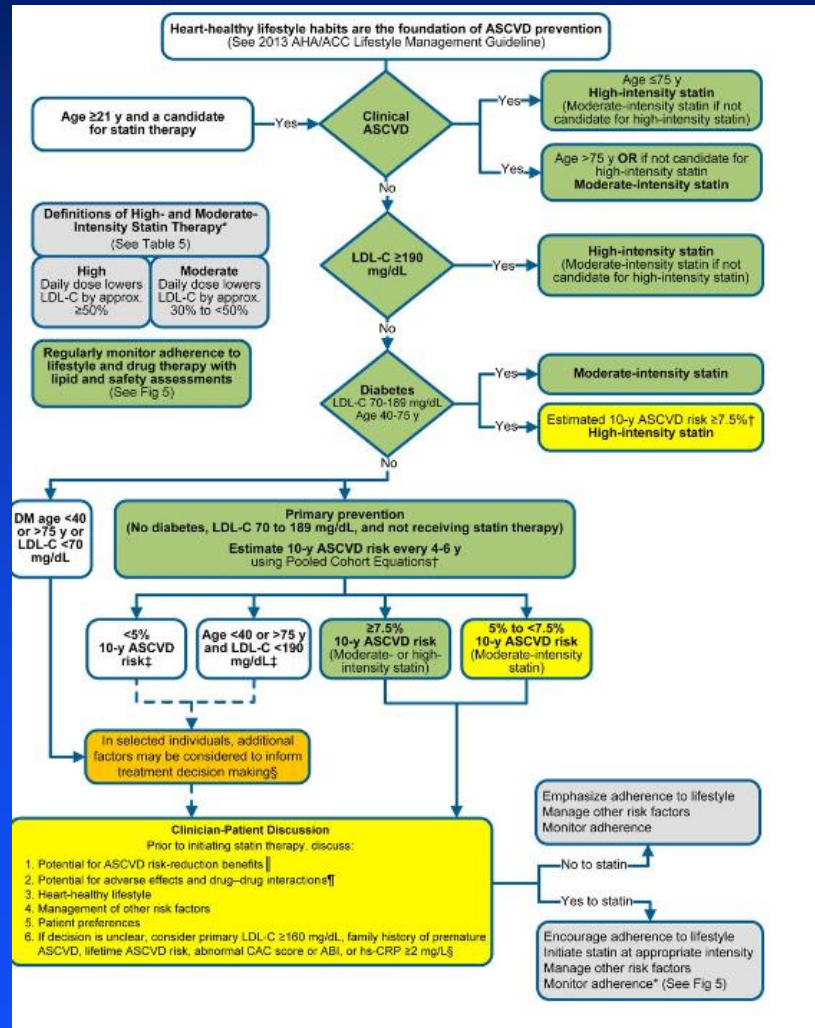
In general, lowering your risk factor levels will lower your projected heart attack risk estimate. However, the HDL (good) cholesterol risk factor is the exception.

\*\*targets are not part of new cholesterol guidelines for statin use

# What is Her Risk for Heart Attack in the Next 10 Years?

- a) Very Low Risk <5%**
- b) Low to Intermediate Risk 5-20%**
- c) High Risk >20%**

# Statins can still be prescribed even if your cholesterol looks normal!



# CV Risk Stratification

## High Risk

- **Documented atherosclerotic disease**
  - Clinically manifest coronary heart disease**
  - Clinically manifest peripheral arterial disease**
  - Clinically manifest cerebrovascular disease**
  - Abdominal aortic aneurysm**
- **Diabetes mellitus**
- **End-stage or chronic kidney disease**
- **10-year Framingham cardiovascular disease risk  $\geq$  10%\***

# CV Risk Stratification

## At Risk

≥ 1 risk factor for CVD, including (but not limited to):

- Cigarette smoking
- Hypertension including treated
- Dyslipidemia
- Family history of premature CVD in a 1<sup>st</sup> degree relative  
(CVD at < 55 years in a male relative, or < 65 years in a female relative)
- Obesity, especially central obesity
- Physical inactivity
- Poor diet
- Metabolic syndrome
- Advanced subclinical atherosclerosis
- Poor exercise capacity on treadmill test and/or abnormal heart rate recovery after stopping exercise
- Systemic autoimmune collagen-vascular disease  
(e.g. lupus, rheumatoid arthritis)\*
- A history of pregnancy-induced hypertension, gestational diabetes, preeclampsia\*

**How Do I Prevent CAD and  
Heart Attacks?  
Modify Your Risk**

# Risk Factors You Cannot Control

- Family history of early heart disease
- Age (55 and older for women)
- History of preeclampsia during pregnancy

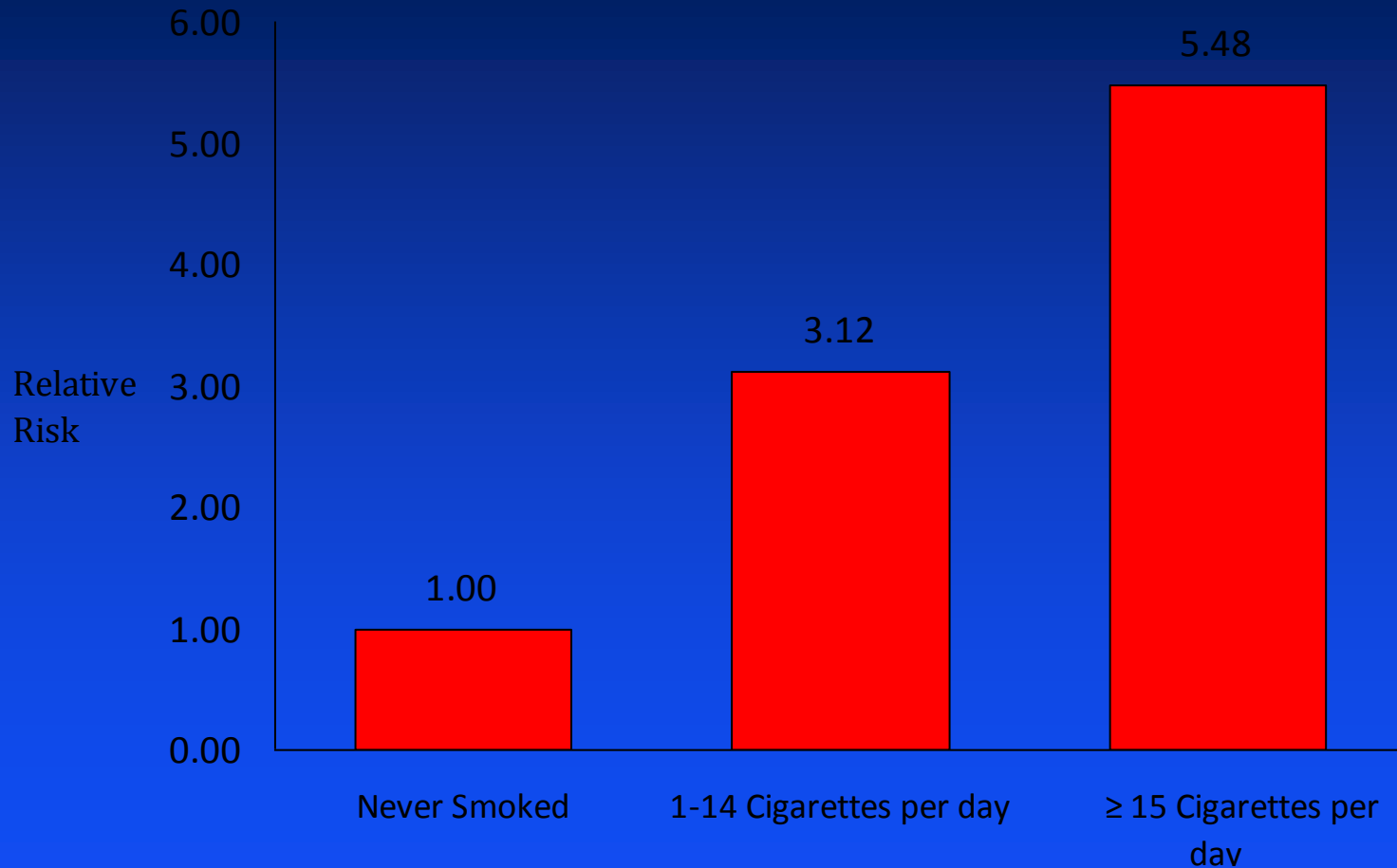


# Risk Factors You Can Control

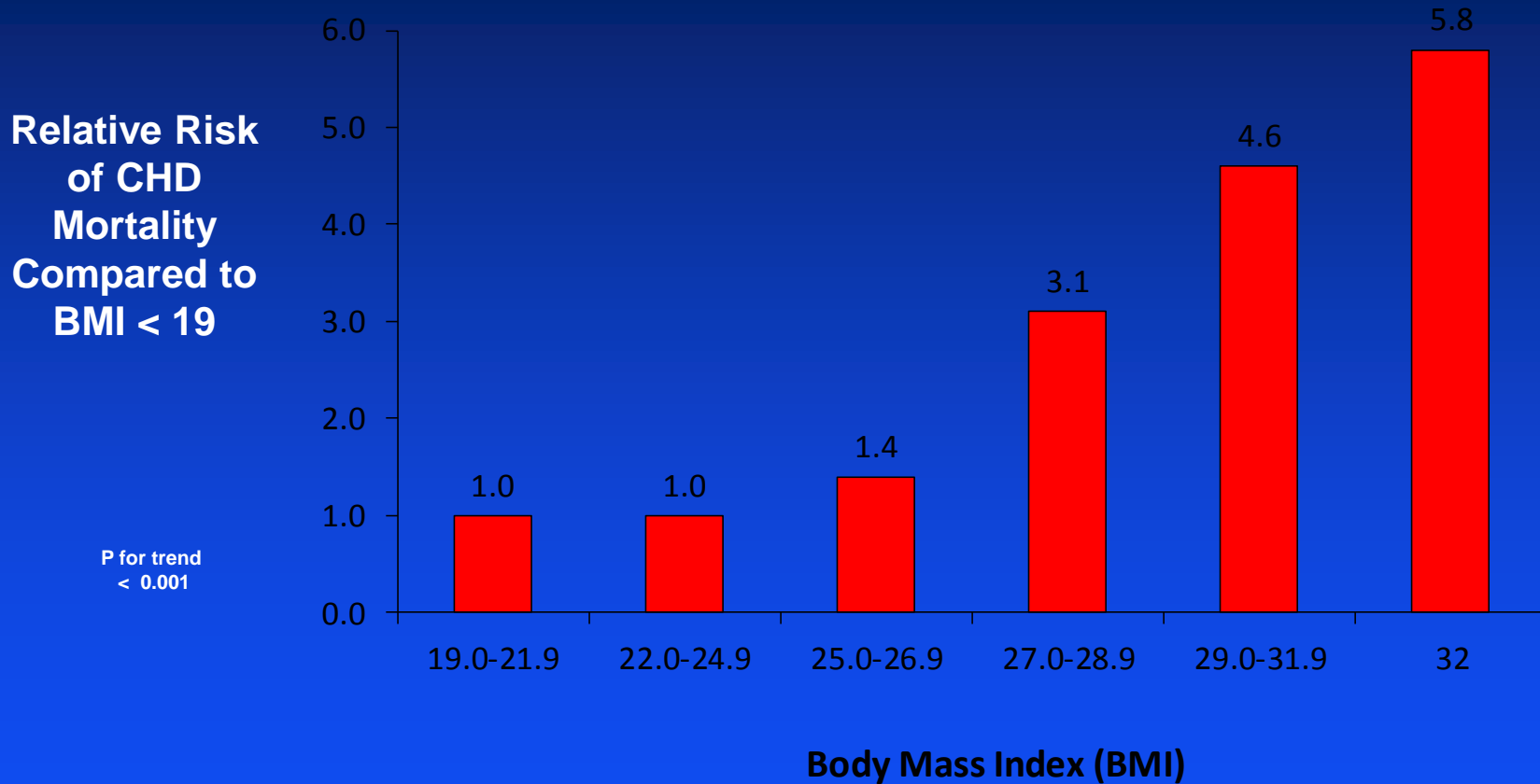
- Smoking
- High blood pressure
- High blood cholesterol and high triglycerides
- Overweight/obesity
- Physical inactivity
- Diabetes and prediabetes
- Metabolic syndrome

# Smoking is Really Harmful

## Relative Risk of Coronary Events for Smokers Compared to Non-Smokers



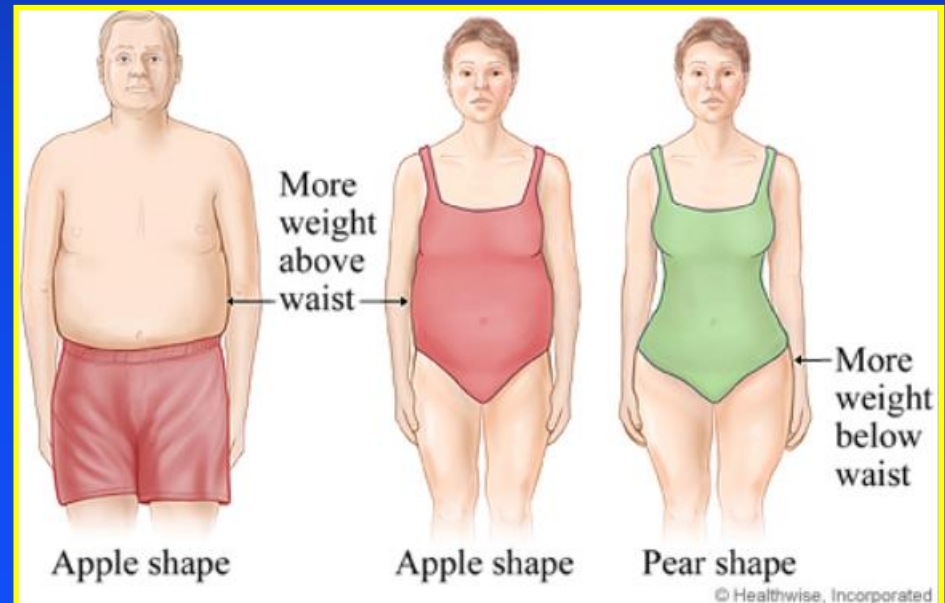
# Body Weight and CV Mortality Among Women



# Metabolic Syndrome

Any 3 of the following:

- Abdominal obesity
- High triglycerides  $\geq 150$  mg/dL
- Low HDL  $< 50$  mg/dL
- BP  $\geq 130/85$  mm Hg
- Fasting glucose  $\geq 100$



# Doctor May Recommend

- **Weight Loss**
- **Daily Exercise**
- **Diet Change**
- **Cholesterol Pill, usually Statin**
- **Baby Aspirin**
- **Portion Control**

# HEALTH BENEFITS of WALKING



20

WALKING 20 MINUTES/DAY WILL BURN 7 POUNDS OF BODY FAT/ YEAR



45

WALKING 45 MINUTES/ DAY HALVES ODDS OF CATCHING A COLD



1

WALKING 1 MINUTE CAN EXTEND LIFE BY 1.5-2 MINUTES



20

WALKING 20-25 MINUTES/WEEK CAN EXTEND LIFE BY SEVERAL YEARS



## DEMENTIA

Seniors who walk 6-9 miles/week are less likely to suffer from mental decline as they age, including dementia.



## DIABETES

Walking 30 minutes/day, 5 days/week, along with moderate diet changes, can halve risk of Type 2 Diabetes.



## HEART DISEASE

Walking 30 minutes/day, 5 days/week can halve the risk of heart disease and reduce stress, cholesterol, and blood pressure.



## ARTHRITIS

Walking can reduce pain and improve function, mobility, mood, and quality of life, without worsening symptoms.



## DEPRESSION

Walking triggers endorphins, promotes relaxation, and prevents anxiety and depression.

WALKING 6 MILES/ WEEK CAN HALVE RISK OF ALZHEIMER'S DISEASE OVER 5 YEARS



WOMEN WHO WALK FOR 1 HOUR/ DAY, 5 DAYS/WEEK AND CONSUME 1,500 CALORIES/ DAY CAN LOSE AND KEEP OFF 25 LBS



WALKING 30 MIN/ DAY, 4 DAYS/WEEK CAN REDUCE THE RISK OF DIABETES BY NEARLY 60%



PROSTATE CANCER PATIENTS WHO WALK 90 MIN/WEEK HAVE NEARLY 50% LOWER MORTALITY RISK



WOMEN WHO WALK REGULARLY ARE 31% LESS LIKELY TO DEVELOP COLON CANCER THAN THOSE WHO EXERCISE LESS THAN ONE HOUR/ WEEK



# Walk Alachua County

- Saturday in Feb 8:30 to 10:30
- Feb 4, 11, 18, and 25<sup>th</sup>
- Santa Fe College Track

3000 NW 83rd St

Gainesville, FL 32606

### CALORIE CALCULATOR

The workout calorie calculator helps you calculate calories burned during a workout - walking, biking, swimming, cycling, even kayaking. It uses standard calorie calculations based on your height, weight, gender and the duration of your workout. Plan healthy meals and track calories to help you meet your fitness goals.

Units  US  Metric

Weight  lb    Height  ft  in    Age

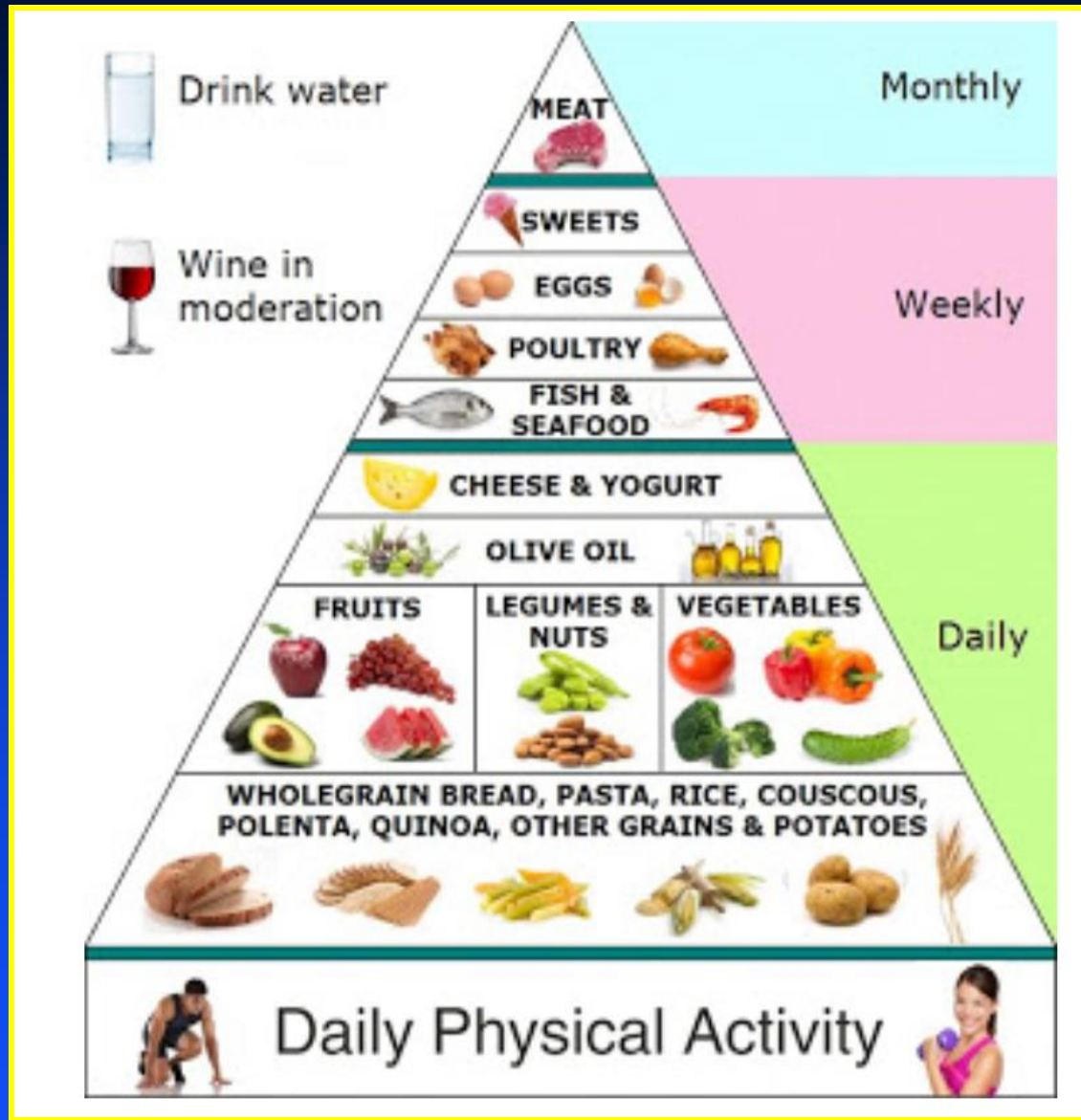
Gender  Male  Female

Activity     Distance  mi

Duration  :  :

**209** Calories Burned

# What is a Mediterranean Diet?





# Test Your Knowledge

## Fact or Fiction?

- **Saturated Fat is Good For you**
- **(dairy, meat, pork, cheese)**

# **Test Your Knowledge**

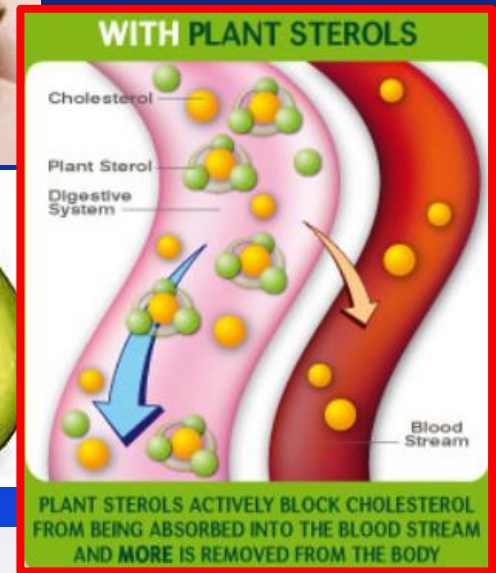
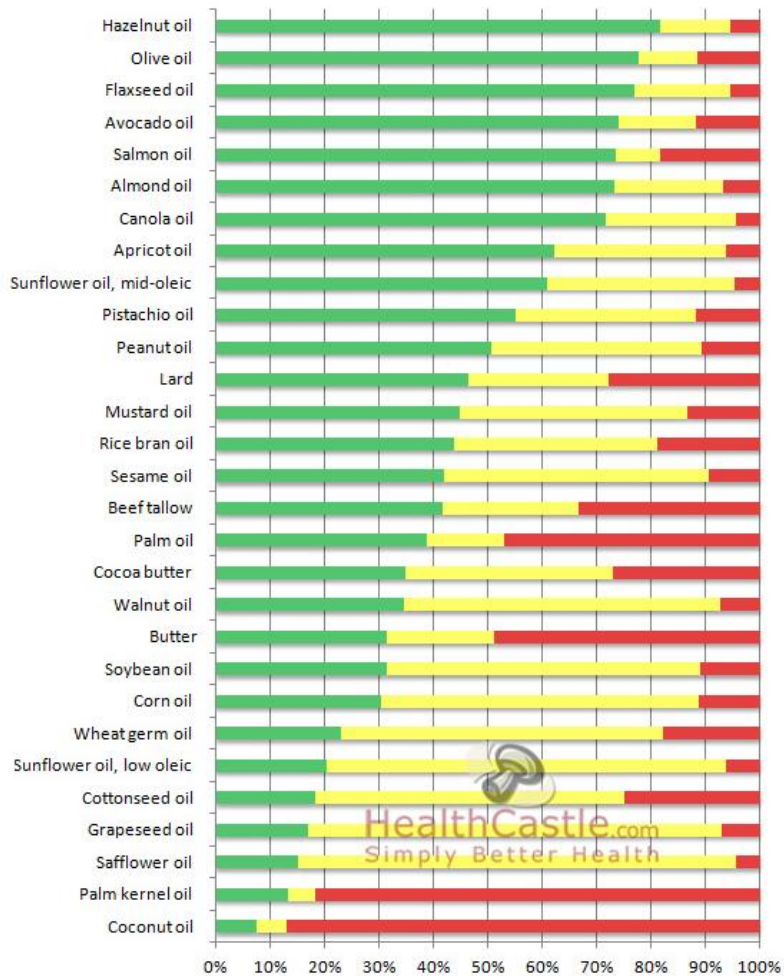
## **FICTION!**

- **Saturated Fat is Good For you**

# Too Much Oil is Bad

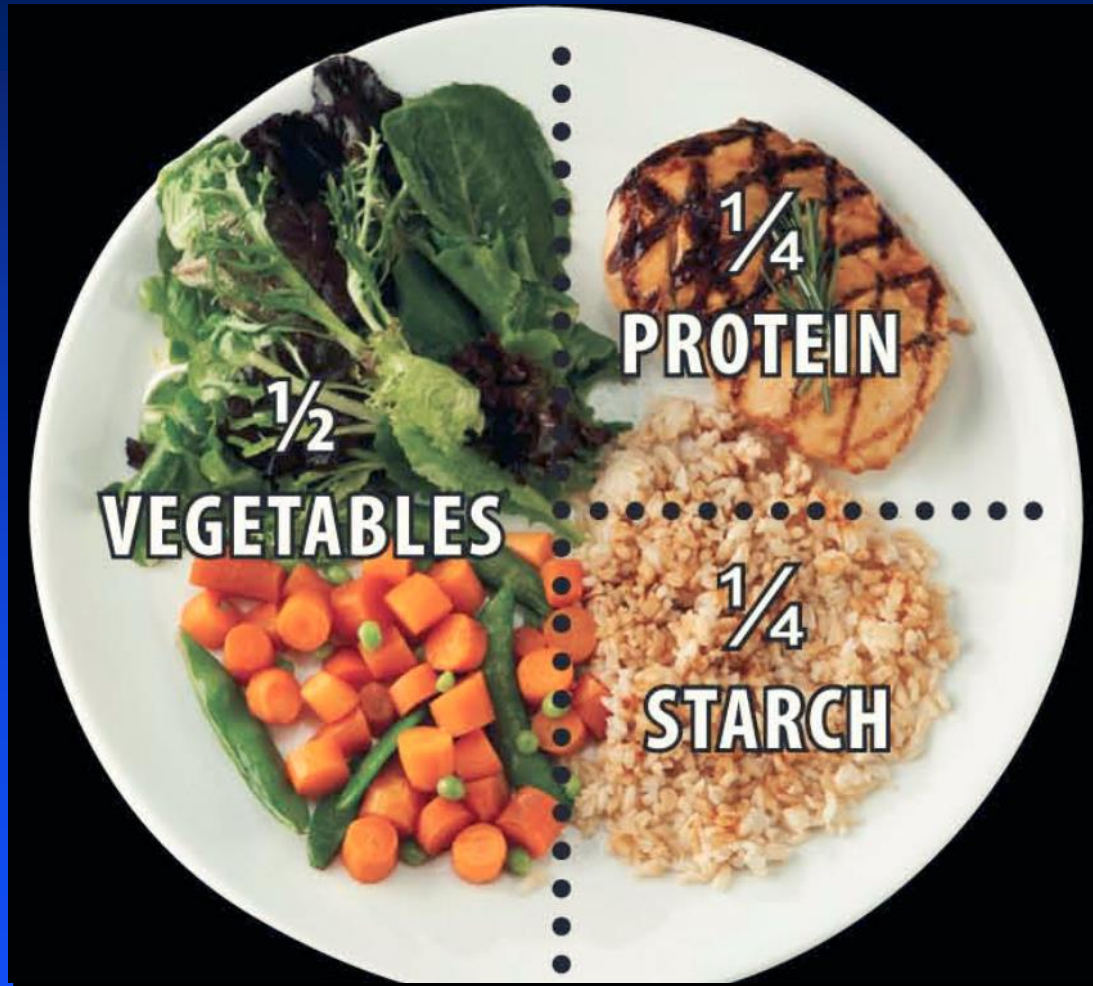
## Omega 3 Essential and 9 Good Oil

### Top 10 Good Cooking Oils



HealthCastle.com  
Simply Better Health

# Portion Control



# The Multiplier Effect

- **The Multiplier Effect**
- **1 risk factor doubles your risk**
- **2 risk factors quadruple your risk**
- **3 or more risk factors can increase your risk more than tenfold**
- **By doing just 4 things – eating right, being physically active, not smoking, and keeping a healthy weight – you can lower your risk of heart disease by as much as 82 percent**

## Other Risk Factors

- Sleep apnea
- Stress or depression
- Too much alcohol
- Birth control pills (particularly for women who are over age 35 and smoke)
- Anemia
- Unhealthy diet

# Have Goals

## Ideal Cardiovascular Health

- Total cholesterol < 200 mg/dL
- BP < 120/<80 mm Hg, untreated
- Fasting blood sugar < 100 mg/dL untreated
- Body mass index < 25 kg/m<sup>2</sup>
- Abstinence from smoking (never or quit > 12 months)
- Physical activity at goal
- DASH-like diet
- We can't all be ideal, but we can work toward it!

# Main Points

- **CVD is the #1 killer in women**
- **Refashion our usual perception of cardiac chest pain if we want to expedite diagnosis**
- **Therapies are all the same but we need to make sure women get them**
- **Recognize the high 1 year mortality in the first year after MI seriously and take counseling/rehab seriously**
- **It all starts with Prevention**