

Women and Heart Disease Prevention – should we be doing anything new?

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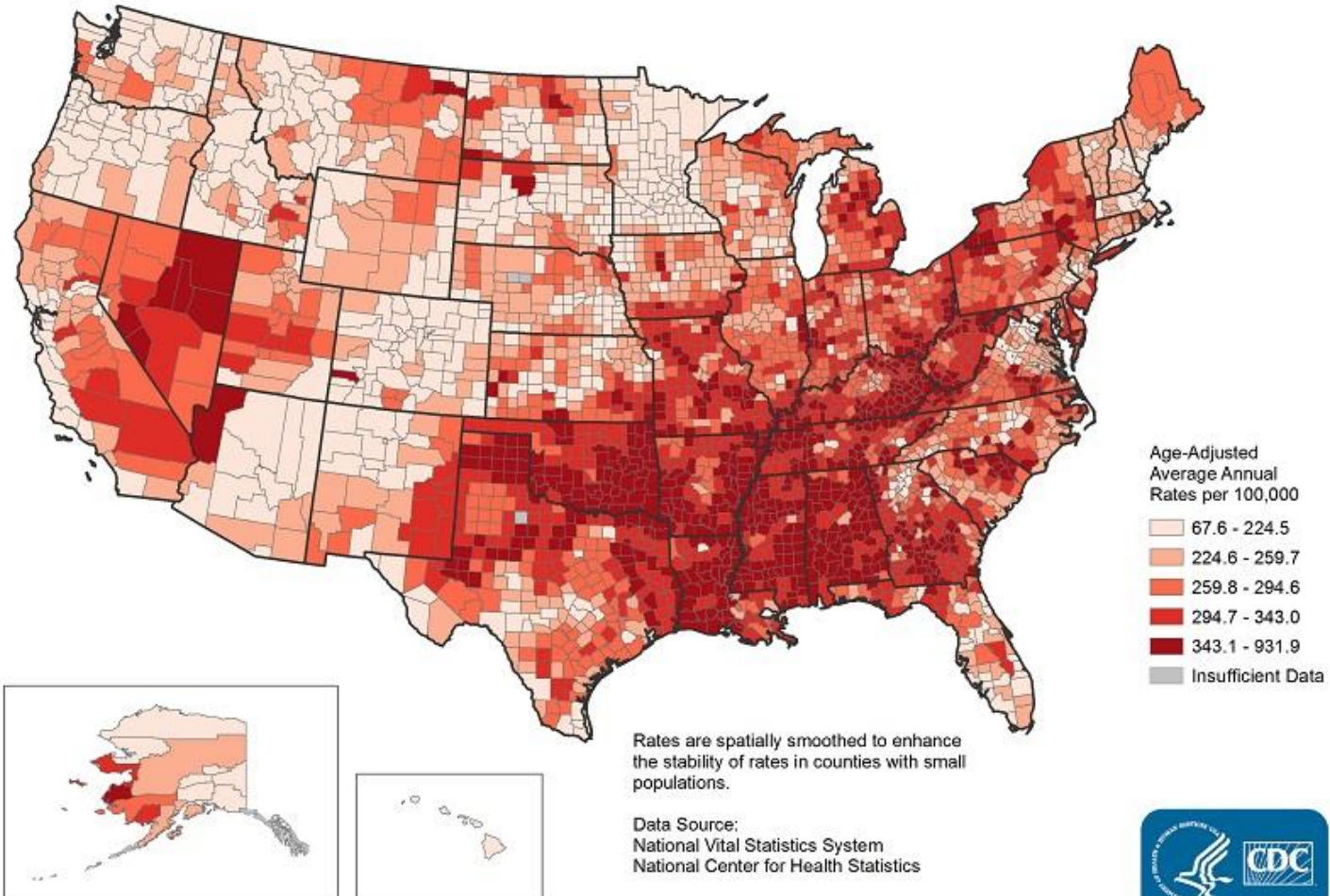
**Mayo Clinic Rochester and Mayo Clinic
Health System**

Heart Disease in Women and Why we are concerned

- 6,600,000 US women
- >440,000 heart attacks/year
- >500,000 die each year
- #1 killer of women (>10x more than breast ca)

1 in 3 women die of heart disease

Heart Disease Death Rates, 2011-2013 Women, Ages 35+, by County



63 % of women...

who died suddenly of CHD had **NO**
previous symptoms.

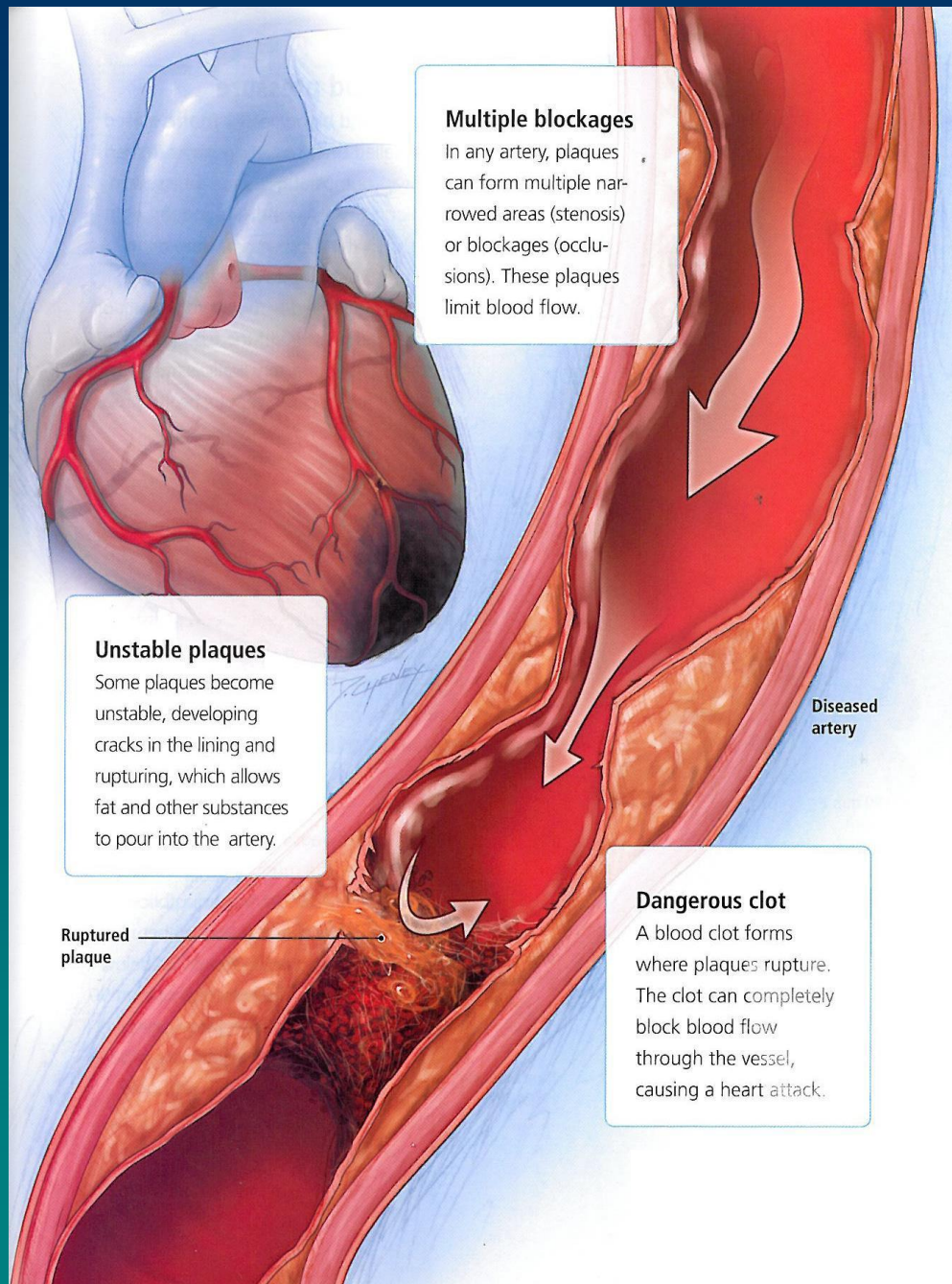
Heart Disease is Different for Women

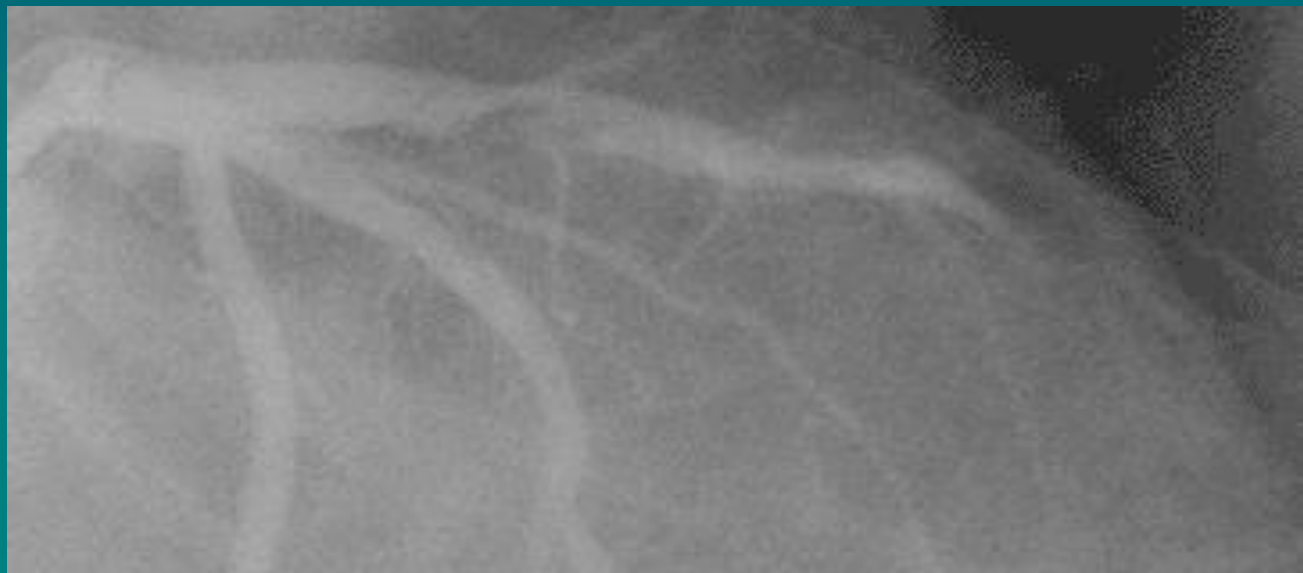
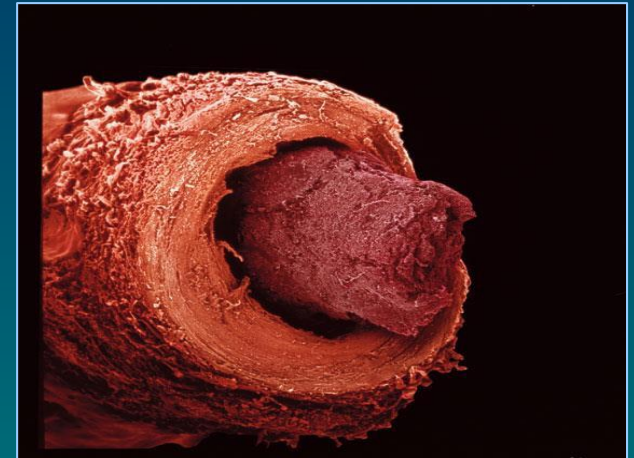
- Breathlessness
- Chronic fatigue
- Dizziness
- Edema
- Fluttering
- Gastric upset



Cardiovascular Diseases Higher Prevalence in Women

- Acute Coronary Syndromes
- Myocardial Infarction with non obstructive CAD
 - Ischemic Heart Disease/CAD
- SCAD--Spontaneous Coronary artery Dissection
- Takotsubo Syndrome-stress induced cardiomyopathy
- Heart Failure with Normal EF
- Peripheral Vascular Disease/AAA





What are the Challenges for Women with Heart Disease?

- Delays in symptom recognition and Rx
- Misdiagnosis
- Treatment
- Less counseling and risk factor control
- Less representation in clinical trials

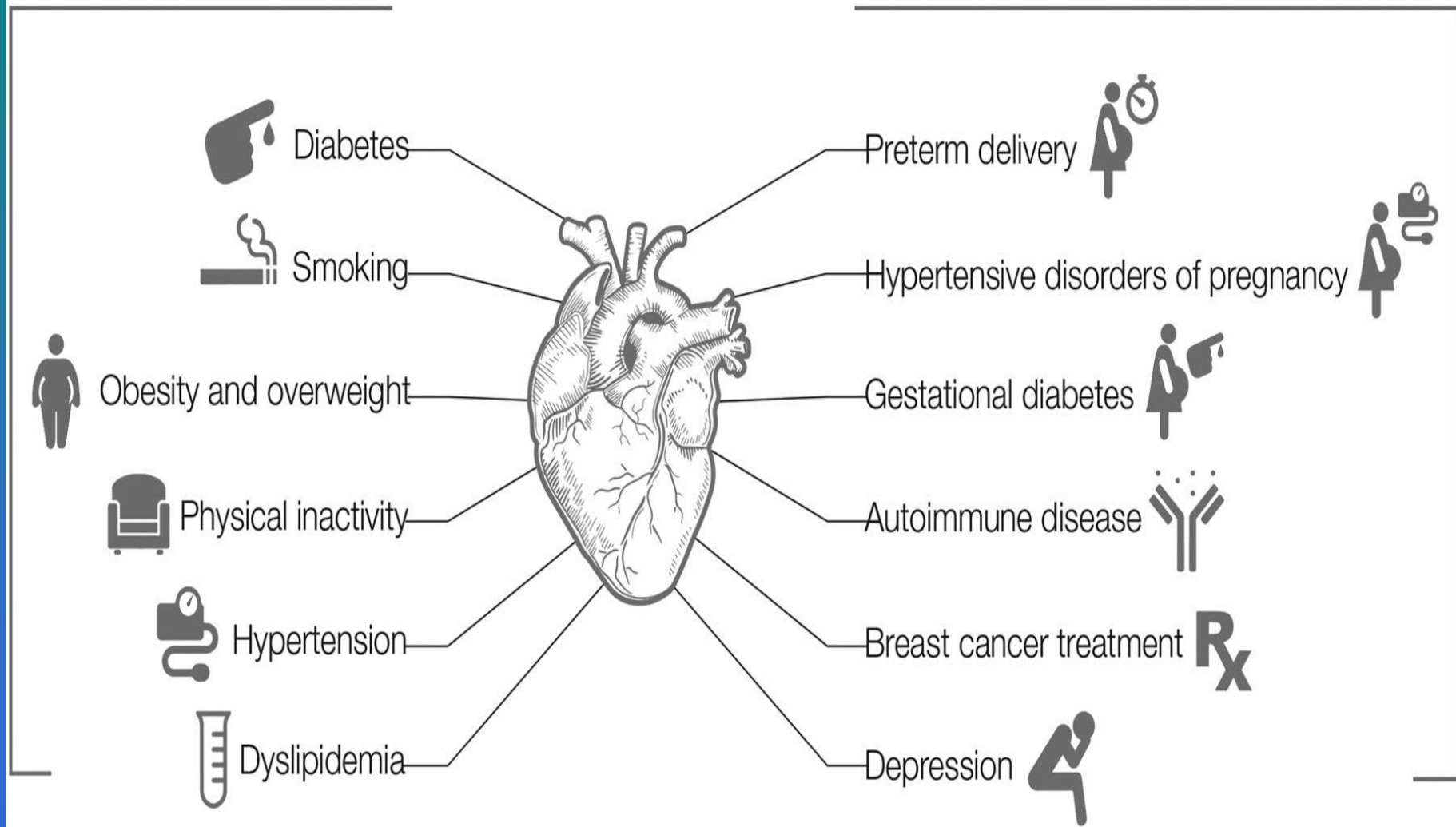
Prevention is the Most Powerful Rx

EVERYONE should know their:

- Blood Pressure
- Weight (BMI)
- Lipid profile
- Blood Sugar
- Smoking
- Family History
- Framingham Risk Score

Traditional ASCVD Risk Factors

Emerging, Nontraditional ASCVD Risk Factors



Hypertension

- Women develop HTN decade after men
- No sex differences outside of pregnancy related HTN
- 2017 ACC/AHA Guideline
 - BP categories
 - NL <120/80mmHg,
 - Stage 1 BPs 130-139mmHg or BPd 80-89mmHg
 - Stage 2 BPs 140mmHg or BPd at least 90mmHg
 - HTN Crisis—BPs >180 and or BPd over 120mmHg

Diabetes

Diabetic women 3X excess fatal CAD risk in women with T2DM compared with non-diabetic women

44% greater risk in women compared to Men

Growing evidence suggest increase risk of Impaired endothelium-dependent vasodilation

Hypercoagulable state

Worse atherogenic dyslipidemia

Increase Metabolic Syndrome

Dyslipidemia in Women

- Highest population adjusted among Women
 - 47% compared with all other known risk-factors
 - Lifestyle modifications-diet/exercise
 - Pharmacological therapy for secondary prevention equally effective women/men
 - ACC/AHA Guidelines
 - Primary Prevention statin tailored sex specific
 - Secondary Prevention used with mod-high ASCVD risk

Obesity and Overweight

- 2 in 3 adults in US
- Prevalence higher among Women 64% Men 46%
- BMI greater than 30

■ WAIST MEASUREMENTS

- <35" (women)
- <40" (men)

**122 Million US Adults are Overweight
or Obese**

Portion Control



Smoking

Women have 25% increase risk for CAD by cigarette smoking compared to men.

Combination of smoking with oral contraceptives has synergistic effect on risk of acute MI, CVA, DVT



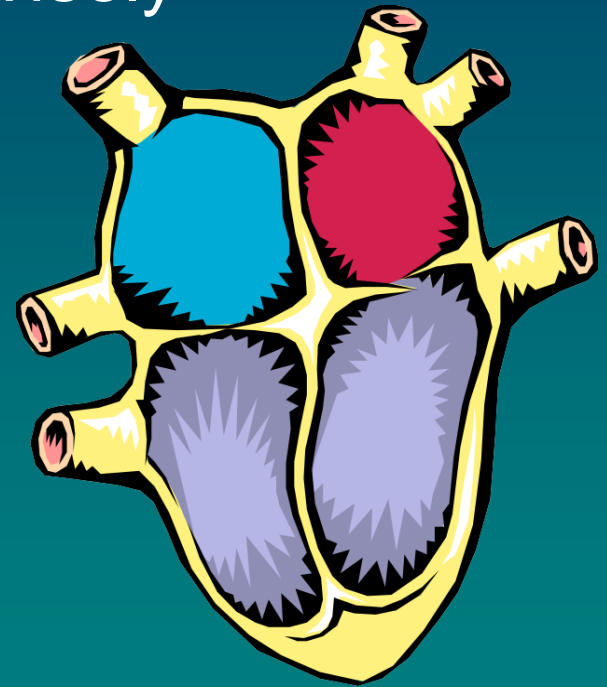
Physical In activity

- Guidelines for Americans recommend adults 150minutes/week moderate intensity activity
- Or 75minutes/week vigorous intensity aerobic activity
- Muscle strength training activities 2 days week

Higher levels of activity and lower rates of many chronic diseases including CVD and increase longevity

Diagnostic Tests for Heart Disease

- Non invasive tests are similar in
 - women and men – Choosing Wisely - appropriateness of tests
- Pretest Probability for CAD by
 - Age, Sex, Symptoms
- Functional Testing
- Anatomic Testing
- Invasive Testing



Treatment are there differences?

- Despite beneficial effect medical therapies such as ASA, ACE/ARB's, BB, Aldosterone inhibitors and statins are frequently delayed in women
- Antithrombotic and antiarrhythmic agents are metabolized differently in women and may increase risk of adverse affects need for dose adjustments—area needing further research

Summary—what is new for Prevention?

- We know average lifetime risk of developing CVD in Women at 50 yrs age is 40% and risk increases as the number of risk factors.
- We need to focus on Primary Prevention of CVD in order to reduce CVD mortality
- We need to identify and treat risk factors keeping in mind non-traditional risk factors as well as educate public.

HEART DISEASE *doesn't* CARE WHAT YOU WEAR



Mannequins Courtesy of Rootstein Mannequins, www.rootstein.com. Red Dresses Photographed by Thomas Card for The Heart Truth.

IT'S THE #1 KILLER OF WOMEN

Being a woman doesn't protect you from heart disease. Try these risk factors on for size: Do you have high blood pressure? High cholesterol? Diabetes? Are you inactive? Are you a smoker? Overweight? If so, this could damage your heart and lead to disability, heart attack, or both.

Talking to your doctor to get answers may save your life. The truth is, it's best to know your risks and to take action now.