

THE WAY TO A WOMAN'S HEART

Improving cardiovascular health in women

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Women in Pharmacy Summit

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DISCLOSURE

I do not have any conflicts of interest

OBJECTIVES

- Explain the risk factors for cardiovascular disease in women
- Compare the signs and symptoms of myocardial infarction between men and women
- Discuss prevention of cardiovascular disease in women based on AHA guidelines



CARDIOVASCULAR DISEASE (CVD)

MYOCARDIAL INFARCTION (MI)

PREVENTION



CARDIOVASCULAR DISEASE

MYOCARDIAL INFARCTION

PREVENTION



CARDIOVASCULAR DISEASE

CARDIOVASCULAR DISEASE

MYOCARDIAL INFARCTION

PREVENTION

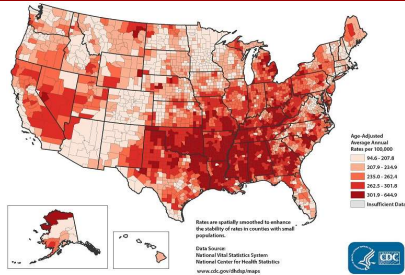
CARDIOVASCULAR DISEASE (CVD)



- Cardiovascular disease is the number 1 killer of women
 - 1 in 5 female deaths each year
- CVD: women > men
- Average age for a woman to have her first myocardial infarction (MI) = 71.8 yo
- In the US, over 6.5 million women die annually from CVD and over 53,000 women die from an MI

CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

HEART DISEASE DEATH RATES, 2015 – 2017



CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

OTHER CONDITIONS RELATED TO HEART DISEASE

- Acute coronary syndrome
- Aortic aneurysm and dissection
- Arrhythmias
- Cardiomyopathy and Heart failure
- Congenital heart defects
- Coronary artery disease (CAD) and Atherosclerosis
- Peripheral arterial disease (PAD)
- Rheumatic heart disease
- Stroke

CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

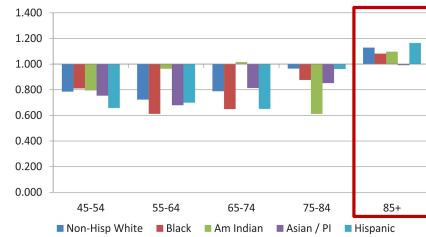
STROKE RISK

- 3rd leading cause for women
- Anticipated increase of the burden of stroke in women
- ~50% of stroke survivors have residual deficits 6 months after stroke
- Ischemic stroke
- Hemorrhagic stroke

Stroke Risk	
C	Congestive heart failure
H	Hypertension
A2	Age ≥ 75yo
D	Diabetes mellitus
S2	Stroke/TIA
V	Vascular disease
A	Age 65 – 74yo
Sc	Sex category = female

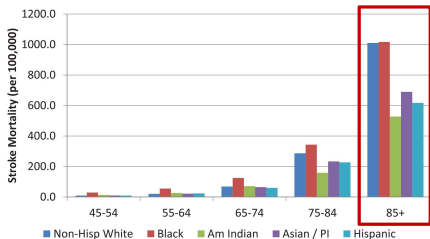
CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

FEMALE-MALE US STROKE MORTALITY RATIO, 2009



CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

US STROKE MORTALITY RATES IN WOMEN, 2009



CARDIOVASCULAR DISEASE MYOCARDIAL INFARCTION PREVENTION

RISK FACTORS

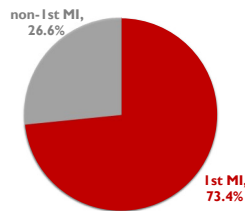
Type II Diabetes mellitus (T2DM)	Pregnancy or pregnancy complications (3 rd trimester and post partum)
Smoking	Inflammatory disease
Age	Migraine headaches
Overweight or Obesity	Physical inactivity
Hypertension	

- Pregnancy as a window to future health
- Heart disease link to dementia in women
 - Hypertension and diabetes mellitus
- Race/ethnicity
 - CVD kill nearly 50,000 African-American women annually
 - Hispanic women can likely to develop heart disease 10 years earlier than non-Hispanics

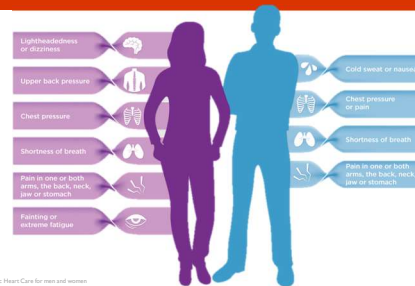
MYOCARDIAL INFARCTION (MI)



- Acute myocardial infarction or 'heart attack'
- Every 40 seconds, someone in the US has a heart attack
 - ~790,000 Americans/year
- 1 of 5 heart attacks are **silent**



Benjamin EJ, et al. American Heart Association. Heart Disease and Stroke Statistics. 2017. 135a1-e458. Ludwig KJ, et al. Transcatheter. American College of Cardiology. 2017;120(12):2128-2134.

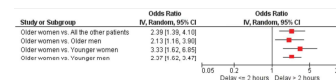


Adapted from: Moorfield Clinic. Heart Care for men and women.

- Women may have prodromal symptoms for up to a year prior to a cardiac event
- Due to coronary microvascular disease
- Attributes to women's higher MI morbidity and mortality rates
 - Delayed hospital arrival



- Early administration of reperfusion therapy in acute ST-elevation myocardial infarctions (STEMI) is crucial to reduce mortality
- MEDEA study: Multicenter Examination of Delay in Patients Experiencing Acute Myocardial Infarction
 - Women > 65yo were more likely to delay > 2 hours compared to other sex- and age-stratification



Benjamin EJ, et al. American Heart Association. Heart Disease and Stroke Statistics. 2017. 135a1-e458. Ludwig KJ, et al. Transcatheter. American College of Cardiology. 2017;120(12):2128-2134.



PREVENTION



PREVENTION OF STROKE IN WOMEN

- Hypertension is the most common modifiable risk factor for stroke
 - Increasing prevalence in postmenopausal women than men after age > 55yo
 - Atrial fibrillation another major modifiable risk factor for stroke
- Diet changes
 - Reduce salt intake (up to 3 gm/day)
- Sex differences in stroke awareness - future epidemiological studies
 - Delayed hospital arrival
 - Warning signs

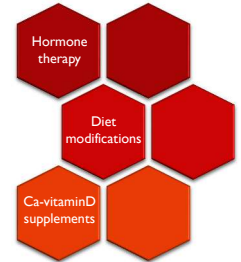
AHA GUIDELINES TARGET GOALS FOR WOMEN

- Total cholesterol level < 200 mg/dL
- BP ≤ 120/80 mmHg
- Fasting BG < 100 mg/dL
- BMI < 25 kg/m²
- Non-smoker
- Regular exercise



WOMEN'S HEALTH INITIATIVE (WHI)

- One of the largest women's health projects ever launched in the US
 - Enrolled >161,000 women at 40 clinical centers
 - RCT: 68,000 postmenopausal women (age 50 – 79yo)
- Sponsored by the National Heart, Lung, and Blood Institute (NHLBI)
- Advance the understanding of women's heart disease and other diseases and identifying strategies for prevention
- WHI extension study 2010 – 2020
 - Focuses on CV events and aging



REDUCING YOUR RISK FOR CARDIOVASCULAR DISEASE

- 80 % of cardiovascular diseases may be prevented
- Healthy lifestyle
 - diet, exercise, adequate sleep, stress reduction, and smoking cessation
- Know your numbers!
 - Blood pressure, blood glucose, lipid panel

TAKE-AWAY POINTS

- Cardiovascular disease is the number 1 killer of women
- Prodromal symptoms in women (up to 1 year)
 - Chest pressure, unusual fatigue, difficulty sleeping, shortness of breath, indigestion
- More common female-specific MI symptoms
 - Chest pressure (instead of chest pain), upper back pressure, dizziness/fainting/ extreme fatigue
- Prevention starts with *Knowing your numbers*

CARDIOVASCULAR DISEASE

MYOCARDIAL INFARCTION

PREVENTION

SUPPORT THE CAUSE



QUESTIONS?



CONTACT INFORMATION

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