2017 Women’s Health Conference

Body & Soul: Discovering a Healthy U

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Thousand Oaks
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Heart Health For Women

Janki Shah, MD
Leading causes of death in perspective

- Heart & circulatory disorders
- Cancer
- Respiratory disorders
- Infectious disorders
- Kidney disorders
- Digestive disorders
- Nervous system disorders
- Non-transport accidents
- Musculoskeletal disorders
- Suicide
- Transport accidents
- Murder
- Medical complications
- Undetermined events
- Pregnancy & birth
- War
2003 – Time magazine realizes that heart disease is a woman’s “biggest worry…”
2016 – AHA releases the first scientific statement on myocardial infarction in women

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; Hurlan 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;133:916-947. DOI: 10.1161/CIR.0000000000000351.)

Key Words: AHA Scientific Statements cardiovascular diseases coronary disease myocardial infarction women
Heart Disease in Women

• Heart disease is the #1 killer of women
  • 1 out of 3 women, killing approximately **one woman every 80 seconds**!
  • It claims more lives than ALL cancers combined!
  • 90% of women have one or more risk factors for developing heart disease.
• 2 out of 3 women who die of heart disease have NO warning signs!
• A woman is more likely to die in the first year after a heart attack than a man is.
CHD: Statistics for U.S. Women

1 in 3 CHD deaths vs 1 in 31 breast cancer deaths

UNDERDIAGNOSED and UNDERTREATED
Why Should Women Have Cardiovascular Screenings?

- Women have easy-to-miss symptoms.
- Half of women who present with a heart attack NEVER had prior warning symptoms.
- More WOMEN than men who have sudden cardiac DEATH had no prior symptoms.
- Women with heart disease and strokes have a worse prognosis than men.
- Women are treated differently
  - Gender Bias
Women’s Symptoms are Easy to Miss

AM I HAVING A HEART ATTACK?

IN WOMEN, HEART ATTACK SYMPTOMS ARE NOT ALWAYS DRAMATIC.
HERE ARE COMMON SIGNS:

- Cold sweat
- Jaw pain
- Shortness of breath (with or without chest discomfort)
- Pressure in the chest
- Nausea or vomiting
- Pain or discomfort in one or both arms

IF YOU HAVE ANY OF THESE SIGNS, DON’T WAIT MORE THAN FIVE MINUTES BEFORE CALLING FOR HELP. CALL 9-1-1 AND GET TO A HOSPITAL RIGHT AWAY.

SOURCE: AMERICAN HEART ASSOCIATION
Risk factors for Heart Disease in Women

RISK FACTORS
• Smoking
• Diabetes
• High cholesterol
• High blood pressure
• Obesity/Overweight
• Physical inactivity
• Family history
• Depression
• Stress

SEX-SPECIFIC RISK FACTORS
• Pre-term delivery
• Gestational hypertension
• Pre-eclampsia
• Gestational diabetes
• Auto-immune disease
• Breast cancer treatment
• Polycystic ovarian syndrome
• Functional hypothalamic amenorrhea
• Menopausal status and hormone use
Risk Factor: Smoking

• Smoking:
  • Causes plaque to form in blood vessels
  • Reduces HDL (“good”) cholesterol
  • Increases blood pressure
  • Increases heart arrhythmias

• Smokers who have a heart attack are more likely to die and die suddenly (within an hour)
  • Puts women who smoke at a much higher risk of developing cardiovascular disease

Risk decreases after quitting
  • 1/3 in 2 years
  • Equal to a non-smoker in 10-14 years
## Risk Factor: Obesity

<table>
<thead>
<tr>
<th>In the United States:</th>
<th>Body mass index (BMI) = kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>34% of adults are overweight</td>
<td>• Under weight: BMI &lt; 18.5</td>
</tr>
<tr>
<td>34% are obese</td>
<td>• Healthy: BMI 18.5-24.9</td>
</tr>
<tr>
<td>6% are extremely obese</td>
<td>• Overweight: BMI =&gt; 25</td>
</tr>
<tr>
<td>~30% increase in heart disease risk for each five-unit increase in body mass index (BMI)</td>
<td>• Obesity: BMI =&gt; 30</td>
</tr>
<tr>
<td></td>
<td>• Morbid Obesity: BMI &gt;= 40</td>
</tr>
</tbody>
</table>
Body Weight and CHD Mortality Among Women

Relative Risk of CHD Mortality Compared to BMI < 19

P for trend < 0.001

<table>
<thead>
<tr>
<th>Body Mass Index (BMI)</th>
<th>Relative Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.0-21.9</td>
<td>1.0</td>
</tr>
<tr>
<td>22.0-24.9</td>
<td>1.0</td>
</tr>
<tr>
<td>25.0-26.8</td>
<td>1.4</td>
</tr>
<tr>
<td>27.0-28.9</td>
<td>3.1</td>
</tr>
<tr>
<td>29.0-31.9</td>
<td>4.6</td>
</tr>
<tr>
<td>32.0</td>
<td>5.8</td>
</tr>
</tbody>
</table>
Low Risk* Diet is Associated with Lower Risk of Heart Attack in Women

* Consumption of vegetables, fruit, whole grains, fish, legumes
1 = little consumption / 5 = high consumption

Diet Score by Quintile

Relative Risk of MI* (Adjusted for other cardiovascular risk factors)

1.71 1.50 1.28 1.22 1.00
AHA recommendations for a Healthy Diet

• 5 cups of fruits/vegetable per day
  • Not canned, not frozen fruits with added sugars, not fruit drinks

• 3.5 ounces or more whole grains a day
  • Whole wheat flour, bulgur, oatmeal, whole cornmeal, brown rice

• 2-3 servings of fish/week
  • Preferably oily fish – have omega 3 fatty acids
  • Salmon, mackerel, trout, herring

• Under 450 calories added sugar/week
  • Avoid processed sugars and syrups, soft drinks, sugar-sweetened beverages

• Less than 1500 mg sodium/day
Why Exercise?

- Helps in weight loss.
- Increases HDL (good cholesterol)
- Decreases blood pressure.

How?

- Goal 150 minutes of moderate or 75 minutes vigorous exercise a week (or equivalent combination)
- Aerobic exercises (brisk walking, jogging, swimming) at least 5 times a week lasting 30 minutes.
- Target heart rate: 50-75 percent of your maximum heart rate.
Risk Reduction for CHD Associated with Exercise

![Bar chart showing relative risk reduction for CHD associated with exercise across different quintile groups for activity (MET - hr/wk). The chart compares walking and any physical exercise.]

- Walking:
  - Quintile Group 1: 1.00
  - Quintile Group 2: 0.70
  - Quintile Group 3: 0.75
  - Quintile Group 4: 0.55
  - Quintile Group 5: 0.50

- Any Physical Exercise:
  - Quintile Group 1: 1.00
  - Quintile Group 2: 0.80
  - Quintile Group 3: 0.65
  - Quintile Group 4: 0.58
  - Quintile Group 5: 0.50

Relative Risk

Quintile Group for Activity (MET - hr/wk)
Risk Factor: Diabetes

Coronary Artery Disease Mortality in Women with Diabetes

The risk of coronary heart disease was >6-fold that of women without diabetes!
Risk Factor: Hypertension

- Know Your Numbers: Classification of Blood Pressure

<table>
<thead>
<tr>
<th>Blood Pressure Category</th>
<th>Systolic mm Hg (upper #)</th>
<th>and</th>
<th>Diastolic mm Hg (lower #)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>less than 120</td>
<td>and</td>
<td>less than 80</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120 – 139</td>
<td>or</td>
<td>80 – 89</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>140 – 159</td>
<td>or</td>
<td>90 – 99</td>
</tr>
<tr>
<td>(Hypertension) Stage 1</td>
<td></td>
<td>or</td>
<td>100 or higher</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>160 or higher</td>
<td>or</td>
<td>Higher than 110</td>
</tr>
<tr>
<td>(Hypertension) Stage 2</td>
<td></td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Hypertensive Crisis</td>
<td>Higher than 180</td>
<td>or</td>
<td></td>
</tr>
<tr>
<td>(Emergency care needed)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prevalence of high blood pressure in adults ≥20 years of age by age and sex

High blood pressure is very common as we get older
### Lifestyle Modifications to Reduce BP

<table>
<thead>
<tr>
<th>Lifestyle Factor</th>
<th>Recommendation</th>
<th>Reduction in SBP (mmHg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight reduction</td>
<td>Maintain BMI 18.5-24.9</td>
<td>5-20 per 10 kg wt loss</td>
</tr>
<tr>
<td>Diet</td>
<td>Diet rich in fruits/veggies, low fat dairy, reduced saturated and total fat</td>
<td>8-14</td>
</tr>
<tr>
<td>Sodium Restriction</td>
<td>&lt;2.4 gm sodium daily</td>
<td>2-8</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>30 minutes of brisk aerobic activity per day most days of week</td>
<td>4-9</td>
</tr>
<tr>
<td>Moderation of EtOH consumption</td>
<td>No more than 2 drinks per day for men, 1 for women</td>
<td>2-4</td>
</tr>
</tbody>
</table>
Benefits of Lowering Your Blood Pressure

When you lower your blood pressure, you lower your risk of:

- Stroke by 40%
- Heart Attack by 25%
- Heart Failure by 50%
# Cholesterol - Know Your Numbers!

<table>
<thead>
<tr>
<th>National Cholesterol Education Program Cholesterol Guidelines</th>
<th>Desirable</th>
<th>Borderline High</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Cholesterol</strong></td>
<td>Less than 200</td>
<td>200 - 239</td>
<td>240 and higher</td>
</tr>
<tr>
<td><strong>LDL Cholesterol (the &quot;bad&quot; cholesterol)</strong></td>
<td>Less than 130</td>
<td>130 - 159</td>
<td>160 and higher</td>
</tr>
<tr>
<td><strong>HDL Cholesterol (the &quot;good&quot; cholesterol)</strong></td>
<td>50 and higher</td>
<td>40 - 49</td>
<td>Less than 40</td>
</tr>
<tr>
<td><strong>Triglycerides</strong></td>
<td>Less than 200</td>
<td>200 - 399</td>
<td>400 and higher</td>
</tr>
</tbody>
</table>

*UCLA Health*
Stress and Heart Disease
Cardiac Deaths and Fear: The Northridge earthquake

January 1991

January 1992

January 1993

January 1994

Day of the earthquake
Increase in Heart Attacks in England after English soccer team loses to Argentina

1998 World Cup Soccer Match

Day of match 1 day after 2 days after 3 days after 4 days after

British Medical Journal 2002;325:1439
How to Reduce Stress

• Diet: Increase antioxidants, limit stimulants/processed foods

• Exercise: Cardiovascular and weight-bearing

• Mindfulness: Yoga/meditation/tai chi

• Counseling: target psychosocial triggers
Who Should Get a Cardiovascular Screening?

American College of Cardiology **CLASS 1** recommendation:
A global risk score should be obtained in **ALL asymptomatic women**
CALL TO ACTION!

• Schedule a heart screening
• Advanced testing may reveal an increased risk of heart disease and stroke, allowing for earlier detection and prevention!
• Follow The AHA’s Life Simple 7 program!
Life’s Simple 7

- GET ACTIVE
- CONTROL CHOLESTEROL
- EAT BETTER
- MANAGE BLOOD PRESSURE
- LOSE WEIGHT
- REDUCE BLOOD SUGAR
- STOP SMOKING
Questions?

Thank you!

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