



HEALTHY ARIZONA WORKSITES PROGRAM
(HAWP) PRESENTS:

WOMEN AND HEART HEALTH: HEART DISEASE AND PREVENTION FOR WOMEN

Presented by:

RACHEL BOND, MD

*Cardiologist and Arizona System Director of Women's Heart
Health*



HEALTHYAZWORKSITES.ORG

WEBINAR HOUSEKEEPING

WELCOME

All lines have been muted.

Please type any questions into the chat or Questions panel and we will do our best to answer them all at the end.

All handouts and a copy of the presentation slides are available in the Handouts panel.

Please complete the survey that will be emailed out after the presentation

A recording will be added to the library of HAWP webinars on our website within 48 hours.

Special thanks to our supporting partner Dignity Health for their generous support in making this webinar possible.

Women and Heart Health

Heart Disease and Prevention

Rachel M. Bond MD, FACC

System Director, Women's Heart Health
Dignity Health, Arizona

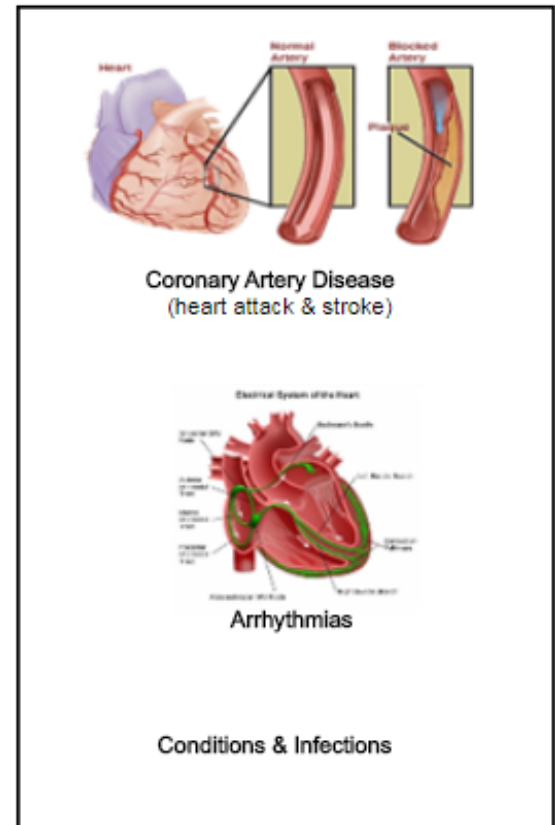
Healthy Arizona Worksites
February 11, 2021



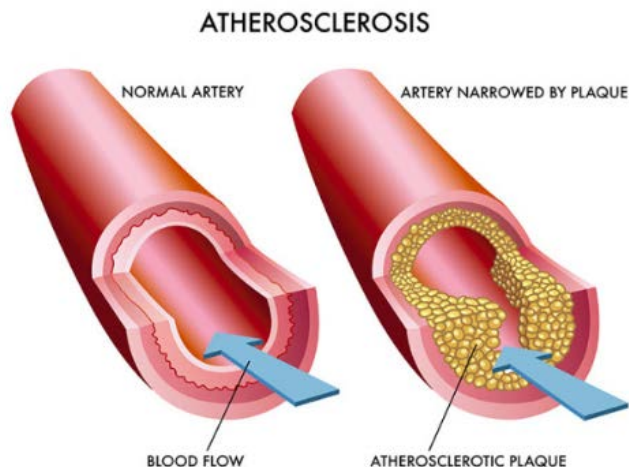
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What is Heart Disease?

Heart disease is a umbrella term used to describe a range of diseases that affect your heart.



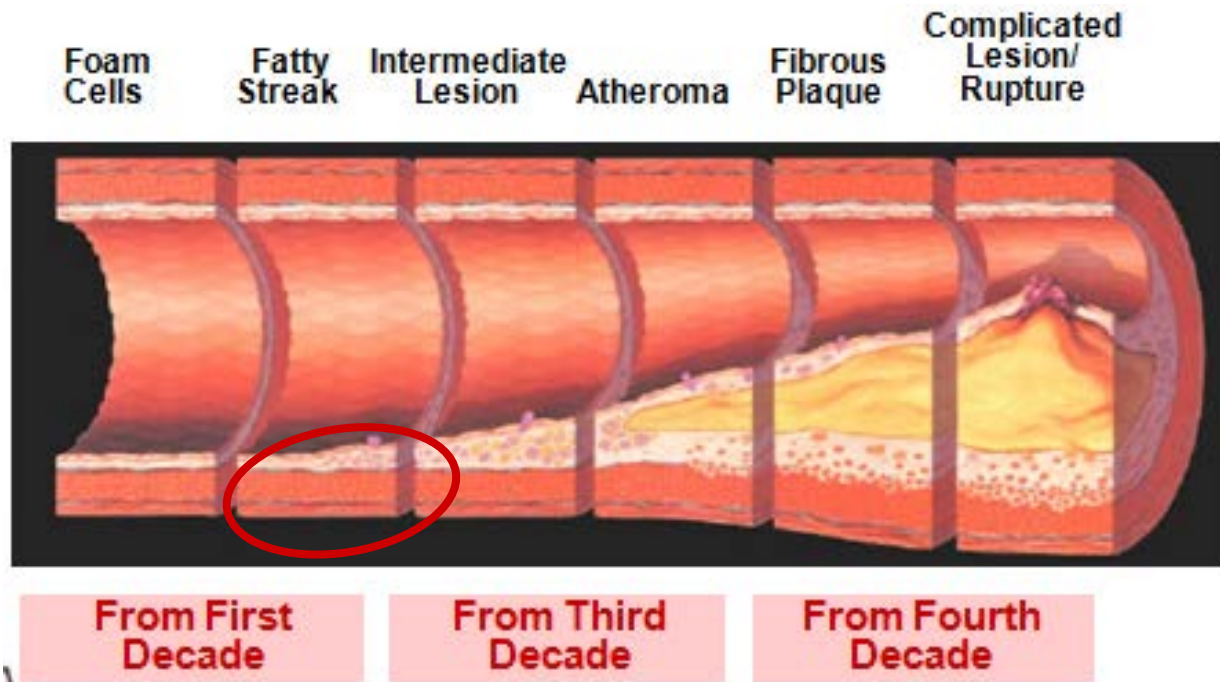
What is Coronary Artery Disease?



♥ Overtime, fatty deposits called **plaque** build up within the artery walls making the artery become narrow. This is **atherosclerosis**.

♥ When this occurs in the coronary arteries, the heart does not get sufficient blood and the condition is called coronary artery disease (**CAD**).

Myth : fat deposits at old age! It starts from 2 years of age



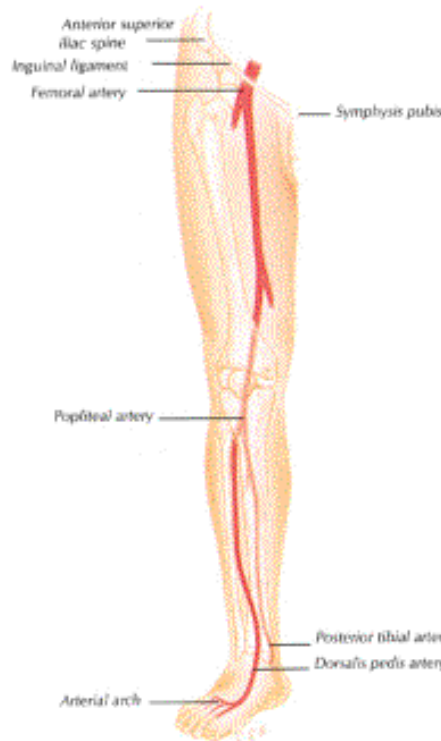
Are Other Organs Affected?

Cardiovascular Disease (CVD)



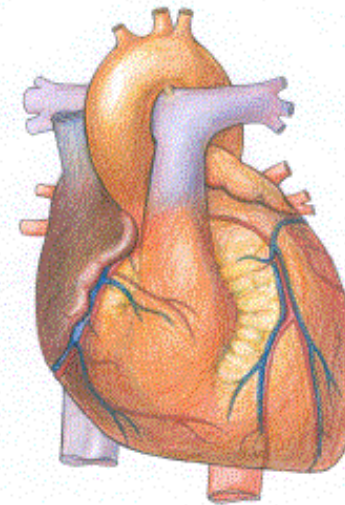
Ischemic Stroke

- Facial drooping
- Arm weakness
- Speech difficulty
- Time to call 911!



Peripheral Vascular Disease

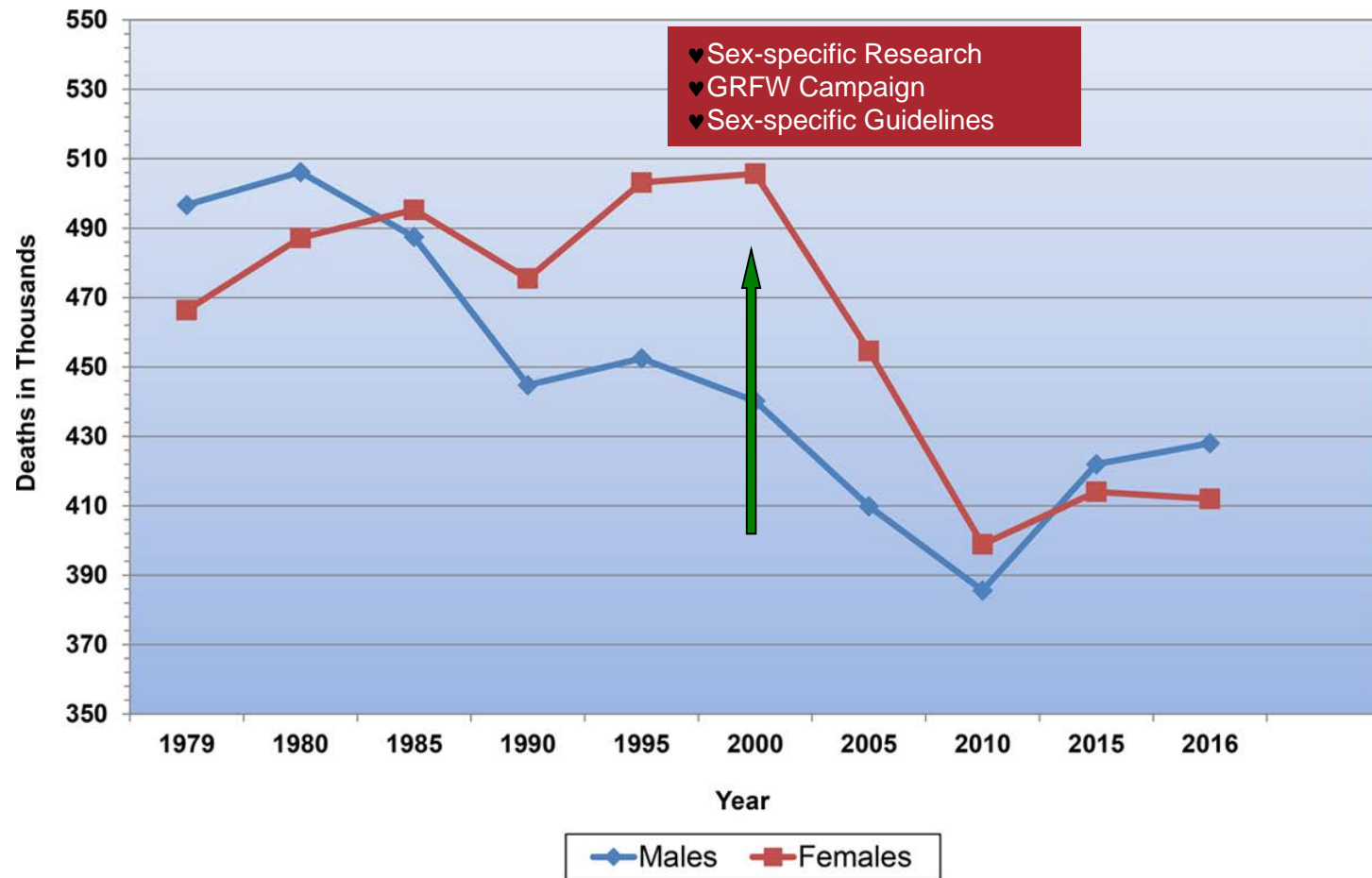
- Leg cramps with activity, relieved with rest
- Non-healing foot ulcers



Coronary Artery Disease

- Angina/Chest Pain
- Heart Attack
- Sudden Cardiac Death

Cardiovascular Disease is an Equal Opportunity Killer: Mortality Trends in Men vs. Women



Emelia J. Benjamin. Circulation. Heart Disease and Stroke Statistics—2019 Update: A Report From the American Heart Association, Volume: 139, Issue: 10, Pages: e56-e528, DOI: (10.1161/CIR.0000000000000659)

Did You Know?

- **Myth:** Breast cancer is my greatest threat.
- **Reality:** 1 in 31 American women will die from breast cancer.

A woman is **10X** more likely to die of heart disease than breast cancer



1 Women Dies Every 80 Seconds

**1 IN 3 DEATHS IN WOMEN
ARE FROM CARDIOVASCULAR
DISEASE AND STROKE.**



Heart Disease Rates Among Arizonans

- **Nearly 83% of deaths** for those **people >65** are from **heart disease and stroke**.
- With Arizona being the 6th largest land mass in the U.S., Maricopa County has one of the highest rates of coronary heart disease.
- **African American women** suffer the **highest mortality rates for coronary heart disease and stroke in Arizona**, compared to men or women of any race.



National Heart Disease Death Rates By Sex & Age

- **Heart disease** deaths have **declined steadily** over the past 3 decades in **people >65**.
- Improvements in death rates remain **slow in people <55**, particularly in **women**.



WHY?



Awareness is Lacking!

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

Although awareness has increased from 30% to 56%, it's not among all women

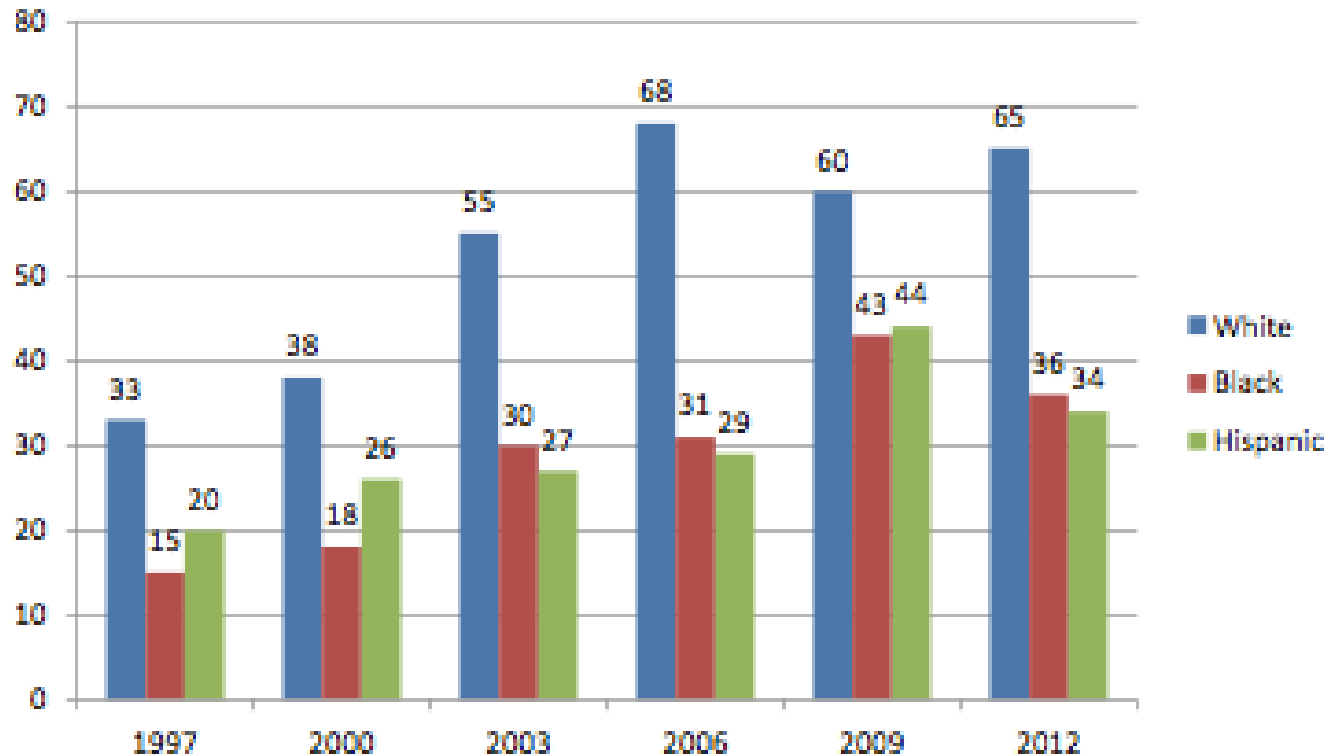
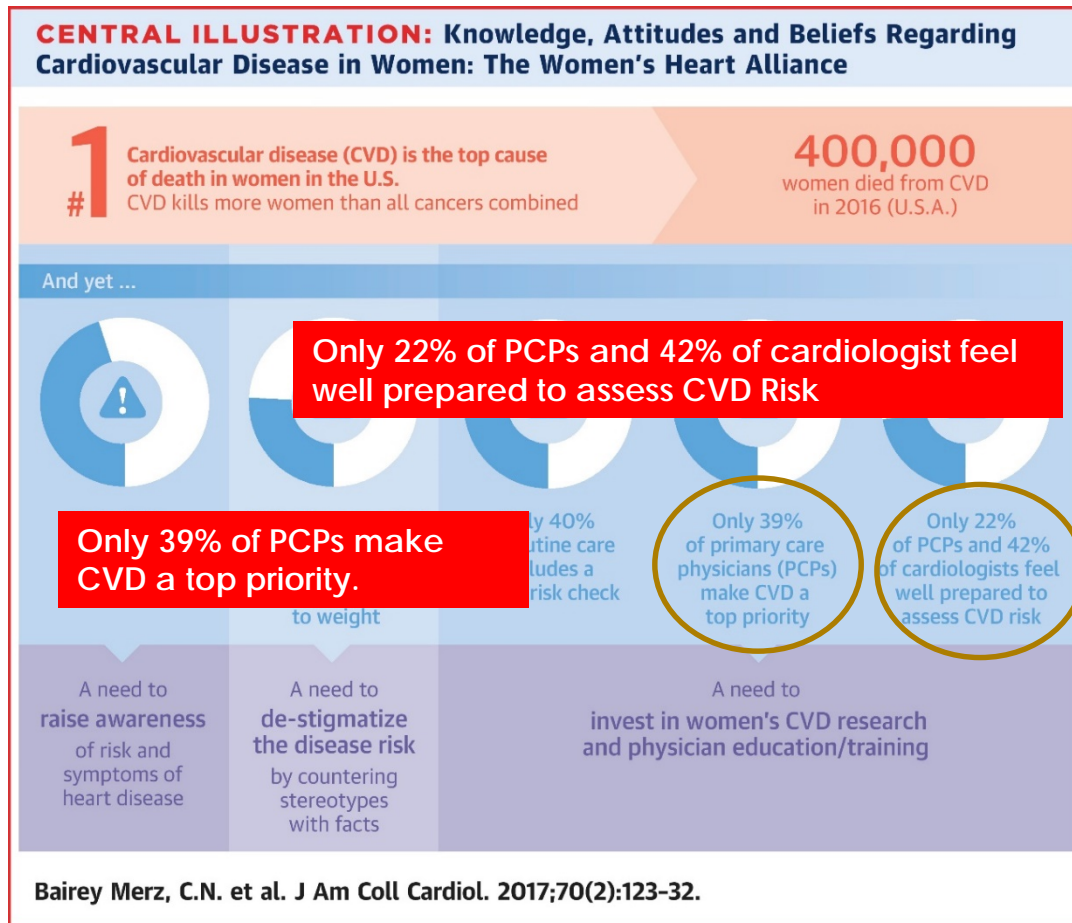


Figure. Trends in awareness that heart disease is the leading cause of death in women.

Mosca L, et al. Fifteen-year trends in awareness of heart disease in women. *Circulation* 2013; 127.

Awareness

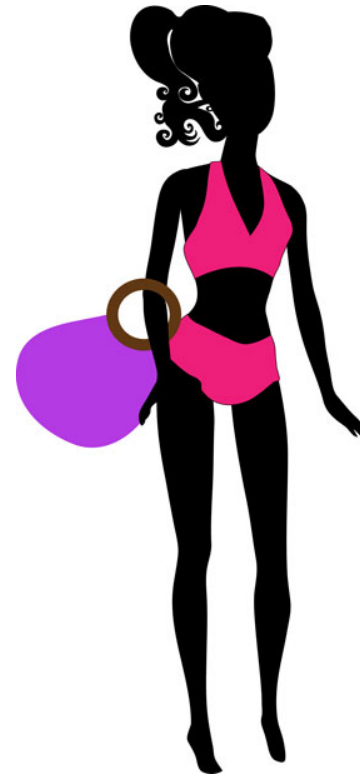


Bikini Medicine

Gender Bias in the Treatment of Women...

“...The community has viewed women’s health almost with a **‘bikini’** approach looking essentially at the breast and reproductive system, and almost ignoring the rest of the woman as part of woman’s health...”

Nanette Wenger, MD
Professor of Medicine
Emory University
Circulation , 2004



Women are Under-represented in Cardiac Research

Most heart disease research has been conducted on men. Women make up less than 30 percent of clinical trials for heart failure and coronary artery disease.

JOYCE TSENG/CHN



Source: *Circulation: Cardiovascular Quality and Outcomes*, 2010.

Females are Under-represented in the Cardiology Field

Fewer than 1 in 5 cardiologists are women.



JOYCE TSENG/CHN

Source: Journal of the American College of Cardiology, 2009.

Current State of Heart Health: Outline

Prevention:

- ♥ Traditional Risk Factors
- ♥ Female-Specific Risk Factors
- ♥ Other Non-conventional Risk Factors
- ♥ Symptoms (Men vs. Women)
- ♥ Calcium Score

Management:

- ♥ Behavioral/Lifestyle modifications (**AHA Life's Simple 7**)

Traditional Risk Factors for Heart Disease

**Heart Disease
is 80%
Preventable!**

- **High blood pressure, high cholesterol, and smoking** are key risk factors for heart disease.
 - About **half of Americans** (49%) have at least one of these three risk factors.
- Several other medical conditions and lifestyle choices can increase ones risk for heart disease, including:
 - **Diabetes**
 - **Overweight (BMI >25) and obesity (BMI >30)**
 - **Poor diet**
 - **Physical inactivity**
 - **Excessive alcohol use**
- **Family History** (1st degree relatives ≤55 Men, ≤65 Women),
- **Age** (≥45 Men, ≥55 Women)



CDC. Million Hearts: strategies to reduce the prevalence of leading cardiovascular disease risk factors. United States, 2011. *MMWR* 2011;60(36):1248–51.

Traditional Risk Factors by Sex

High blood pressure is more common in older women than men, and is a stronger contributor to CV disease in women.



Smoking increases the risk of heart disease by 25% more in women than men.



Diabetes increases the risk of CAD 3-7 folds in women, and only 2-3 folds in men.

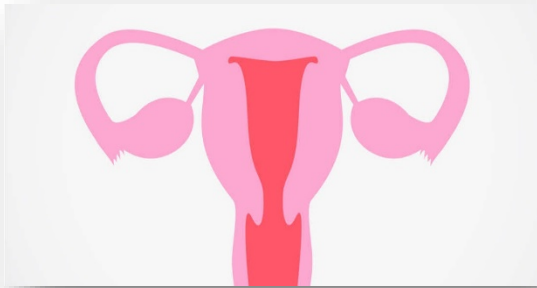


A women who is obese is at a 64% greater risk of having a heart attack, compared to a male (46%).

Risk Factors Special to Women

Polycystic Ovarian Syndrome

Increased risk of CV disease



Menopause

Risk of CV increases markedly after menopause

Early Menopause (≤ 45 years old)

95% high risk of future heart attack



Early Menses (≤ 12 years old)

Increased risk of CV disease



Hormone Replacement Therapy

Increased risk of CV disease



Risk Factors Special to Women (Pregnancy)

Hypertensive Disorders of Pregnancy

Gestational HTN and preeclampsia
3 fold greater risk of CV disease



Gestational Diabetes

4-fold higher risk of CV
59% higher risk of MI



Infants Small for Gestational Age

Increased risk of CV disease



50% increased risk of all cause death making CV disease the leading cause of Maternal Death in the US

Preterm Delivery (<37 weeks gestation)

Increased risk of CV disease

Never Having Children

*Infertility Treatment

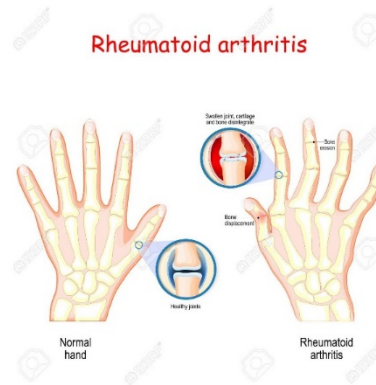
*Miscarriages

Increased risk of CV disease

Risk Factors More Prevalent In Women

Inflammatory Rheumatologic Conditions

Increased risk of CV disease by 50%
Most patients with these conditions are women.



Rheumatoid arthritis

Systemic Lupus Erythematosus



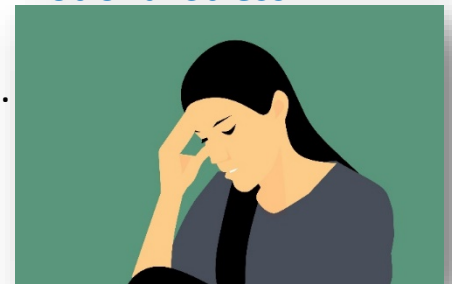
Breast Cancer Treatment

Radiation/Chemotherapy
Increased risk of CV disease
Women with pre-existing cardiac risk factors have greater increases in risk.



Depression/Anxiety/Chronic Emotional Stress

More prevalent in women
Doubles the risk of CV disease.



Non-conventional Risk Factors

- **Chronic Inflammatory Disorders (others)**

Inflammatory Bowel Disease

HIV

Psoriasis

- **Sleep Disorders**

Sleep Apnea

Sleep deprivation



Heart Attack Symptoms

What does the textbook say?

- ♥ Heaviness behind the breast bone; may radiate to jaw and/or left arm;
- ♥ Usually brought on by exertion and relieved by rest and/or nitroglycerin

Classic Presentation of Angina

Patients with chronic angina are more diverse than this classic illustration suggests



Note: Illustration used with permission of Elsevier Inc. All rights reserved.

What else can happen in real life?

Symptoms in Women



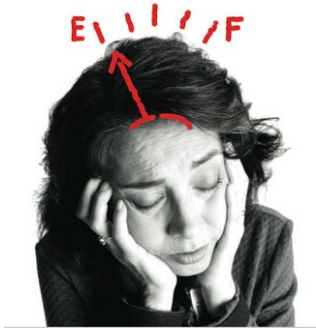
Chest Pain, Discomfort, Pressure or Squeezing, Like there's a ton of weight on your chest



Upper body pain, or discomfort in one or both arms, back, shoulder, neck, jaw or upper part of the stomach



Shortness of Breath



Extreme Fatigue



Breaking out in a cold sweat

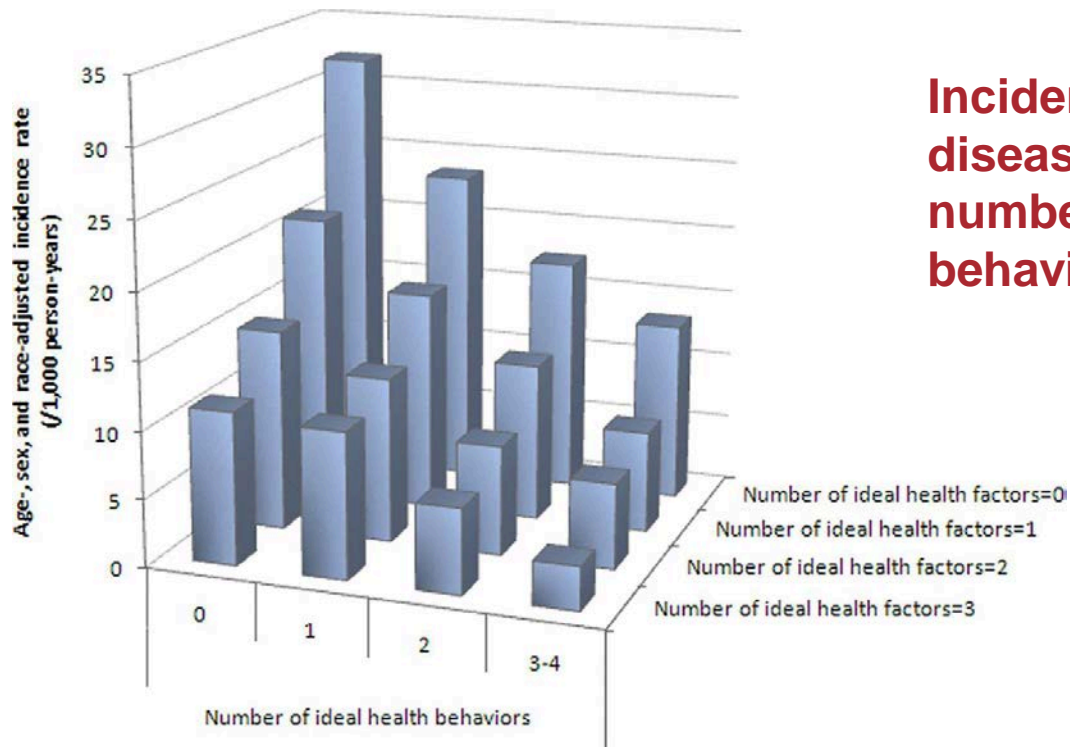


Nausea



Lightheadedness or sudden dizziness

The Good News- Heart Disease Remains Preventable 80% of the Time



Incidence of cardiovascular disease according to the number of ideal health behaviors and health factors.



Dariusz Mozaffarian et al. *Circulation*. 2015;131:e29-e322







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What are These Ideal Health Behaviors?



THE AMERICAN HEART ASSOCIATION'S "LIFE'S SIMPLE 7" STEPS

Get Started Now

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



1. Don't Smoke

- ♥ Traditional cigarettes, electronic cigarettes (or vapes), smokeless tobacco (also called dip, snuff or chew).
- ♥ **Secondhand smoke** is **dangerous** too!
- ♥ Continuing to smoke throughout your life **shaves 13-14 years off** of it.
- ♥ **REMEMBER:**
 - ♥ Even if you've smoked for years, your body can still repair.
 - ♥ Once you stop, your risk can be **cut in half** just one year later and continues to decline until its as low as a non-smoker's risk.



2. Be Physically Active

- ♥ Avoid inactivity:
 - ♥ Some is better than none



- ♥ For substantial benefits:
 - ♥ 150 minutes of moderate intensity per week **OR**
 - ♥ 75 minutes of vigorous intensity per week **AND**
 - ♥ Strength training 2 or more days/week





3. Eat a Heart-Healthy Diet

♥ Ideal Diet: Plant-based diet-DASH Diet;
Mediterranean Diet

♥ **Avoid:**

- ♥ Cut back on saturated/trans-fats, cholesterol (red meat), salt, added sugars, and refined grains (pasta, white rice, processed breads and cereals)
- ♥ Moderation is important!

♥ **Recommendations:**

- ♥ Vegetables, fruits, legumes, nuts
- ♥ Eat unrefined fiber-rich, whole-grain foods
- ♥ Eat fish at least twice a week (Omega 3 Fatty Acid)
- ♥ Healthy oils (olive oil)
- ♥ **Choose skinless lean meats and poultry**
- ♥ Select fat-free, 1% fat, and low-fat dairy products



Learn to Read Nutrition Labels

1. Start here

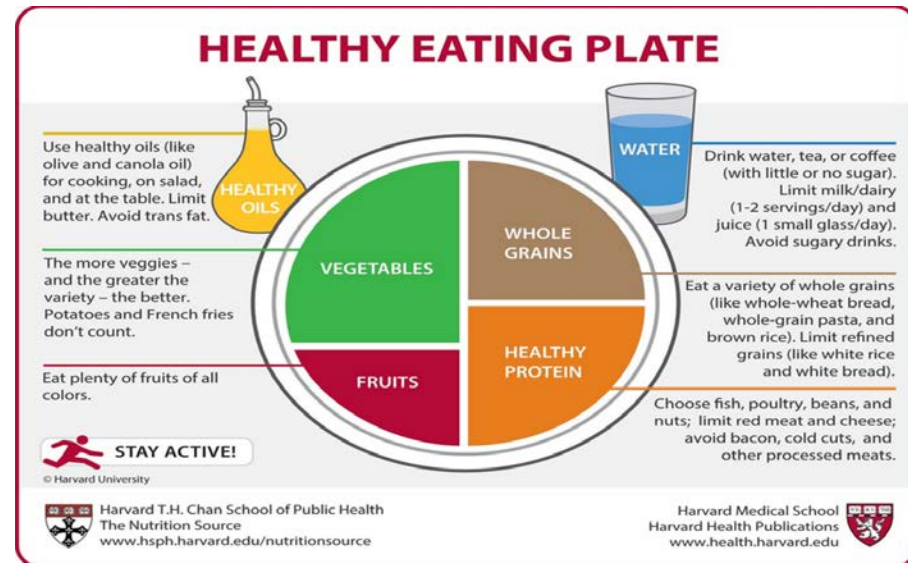
2. Check the total calories per serving

3. Limit these nutrients

4. Get enough of these nutrients

Nutrition Facts	
Serving Size 2/3 cup (55g) Servings Per Container About 8	
Amount Per Serving	
Calories 230	Calories from Fat 72
% Daily Value*	
Total Fat 8g	12%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	12%
Dietary Fiber 4g	16%
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

5. Quick Guide for % Daily Value: 5% or less is low and 20% or more is high



4. Keep a Healthy Weight



- ♥ **Body Mass Index**, or **BMI** for the general population.
 - ♥ If your BMI is **higher than 25**, you need to bring that number down.
 - ♥ BMI >25 (overweight)
 - ♥ BMI >30 (obese)

- ♥ **Waist Circumference**
 - ♥ Men <40 inches
 - ♥ Women <35 inches

- ♥ Losing weight means changing the balance of **calories in to calories out** (e.g. portions, cutting particular foods from our diet).
- ♥ It is also important to participate in **regular physical activity**. To lose weight, requires **60-90 minute of daily exercise**.

5. Keep Your Blood Pressure Healthy

- ♥ Blood pressure is a measure of how easy or difficult it is for blood to be pumped by your heart through your body.
- ♥ **High blood pressure**, or **hypertension**, occurs when the heart has to pump harder to get the blood to go through the vessels.
- ♥ Many people do not have any symptoms when their blood pressure is high; “**Silent Killer**”.
- ♥ You can make healthy choices:
 - ♥ Keeping your weight healthy
 - ♥ Eating a heart-healthy diet with lower levels of sodium, alcohol
 - ♥ Getting enough regular physical activity, stress reduction & relaxation



Measuring Blood Pressure

- ♥ Blood pressure is measured using two numbers.
 - ♥ The first number (**systolic**) represents the pressure in your blood vessels when your heart beats.
 - ♥ The second number (**diastolic**) represents the pressure in your vessels when your heart rests between beats.
- ♥ If the measurement is 120 systolic and 80 diastolic, you would say “120 over 80” or write it as “120/80 mmHg.”

♥ Blood Pressure Categories

- | | |
|------------------------|---------------|
| ♥ Normal | < 120/80 mmHg |
| ♥ Elevated | 120-129/<80 |
| ♥ Stage 1 Hypertension | 130-139/80-89 |
| ♥ Stage 2 Hypertension | >140/90 |





6. Keep Your Cholesterol Levels Under Control

- ♥ Everyone has **cholesterol**.
 - ♥ Cholesterol is a waxy substance in your bloodstream and cells that is necessary for your body to function properly.
- ♥ Some cholesterol is important for good health.
 - ♥ Too much cholesterol in your blood is not good for your body, your brain or your heart.
- ♥ When too much cholesterol circulates in the blood.
 - ♥ It can slowly build up inside the walls of your arteries, make them less flexible and put you at risk for cardiovascular disease.

Keep Your Cholesterol Levels Under Control

- ♥ There are 2 types of cholesterol
 - ♥ **LDL Cholesterol** – Low Density **Lipoproteins** aka **bad cholesterol**
 - ♥ **HDL Cholesterol** – High Density Lipoproteins aka **good cholesterol**
- ♥ About 25% of cholesterol comes directly from what you eat, so we have a lot of control of those numbers.
- ♥ The aim is to have Low LDL's, Low Triglycerides and High HDL's.

- LDL <100 mg/dL
- HDL
 - Men >50 mg/dL
 - Women >60 mg/dL
- Total Cholesterol < 200 mg/dL
- Triglycerides <150 mg/dL





7. Keep Your Blood Sugar Healthy

- ♥ When you consume foods and beverages that contain carbohydrates, the digestive system breaks down the carbohydrates into sugar for energy.
- ♥ Refined goods (aka simple carbohydrates) high in added sugar are typically quickly digested and delivered to the bloodstream as sugar. For example, white bread, white rice, donuts, alcohol in excess.
- ♥ The body has problems either using or making a hormone called **insulin** to regulate our blood sugar levels.

Keep Your Blood Sugar Healthy

- ♥ If your blood sugar goes high too often
 - ♥ It can overwork the body's ability to keep your blood sugar in healthy ranges. If this happens, you become more likely to
 - ♥ Encourage the **growth of plaque in your arteries**
 - ♥ Develop **pre-diabetes** or **diabetes**
- ♥ The body has problems either using or making a hormone called **insulin** to regulate our blood sugar levels

Diabetes Defined by:

- ♥ Fasting blood sugar ≥ 126 mg/dL
- ♥ Hemoglobin A1c $\geq 6.5\%$
- ♥ Random blood sugar ≥ 200 mg/dL with symptoms



Ways to Prevent Heart Disease

♥ Know the Symptoms of a Heart Attack

- ♥ Typical (Male>>Female)
- ♥ Atypical (Female>>Male)

♥ Know Risk Factors

- ♥ Traditional
- ♥ Female-specific
- ♥ Non-conventional

♥ Live a Healthy Lifestyle

- ♥ 150 min/week of mod-intensity activity
- ♥ Heart healthy **PLANT-BASED** diet
- ♥ Avoid cigarettes, excess alcohol

♥ Reduce Stress

- ♥ Practice mindfulness
- ♥ Proper sleep hygiene

Ways to Prevent Heart Disease

♥ Know your numbers (ensure Optimal)

♥ BP <120/80

♥ Cholesterol Levels:

♥ Total Cholesterol <200 mg/dL

♥ LDL <100 mg/dL

♥ HDL >50 mg/dL males or > 60 mg/dL females

♥ TG <150 mg/dL

♥ BMI <25 kg/m²

♥ Waist circumference

♥ <40 inches male

♥ <35 inches female

♥ Blood Sugar:

♥ Fasting glucose levels <100 mg/dL

♥ HbA1c <5.7%

Ways to Prevent Heart Disease

♥ See your physician at least once a year:

♥ History/Physical

♥ Risk Assessment Tools

♥ Imaging (e.g. **calcium score**)



Should You Have a Coronary Artery Calcium Score Checked?

Coronary artery calcium (CAC) scoring is a test that measures the amount of calcium in the walls of heart arteries. Deposits of calcium in the heart arteries are concerning for buildup of plaque, making heart attack or stroke more likely.

CAC is one way to estimate someone's risk of developing heart disease, but CAC is not indicated for everyone.



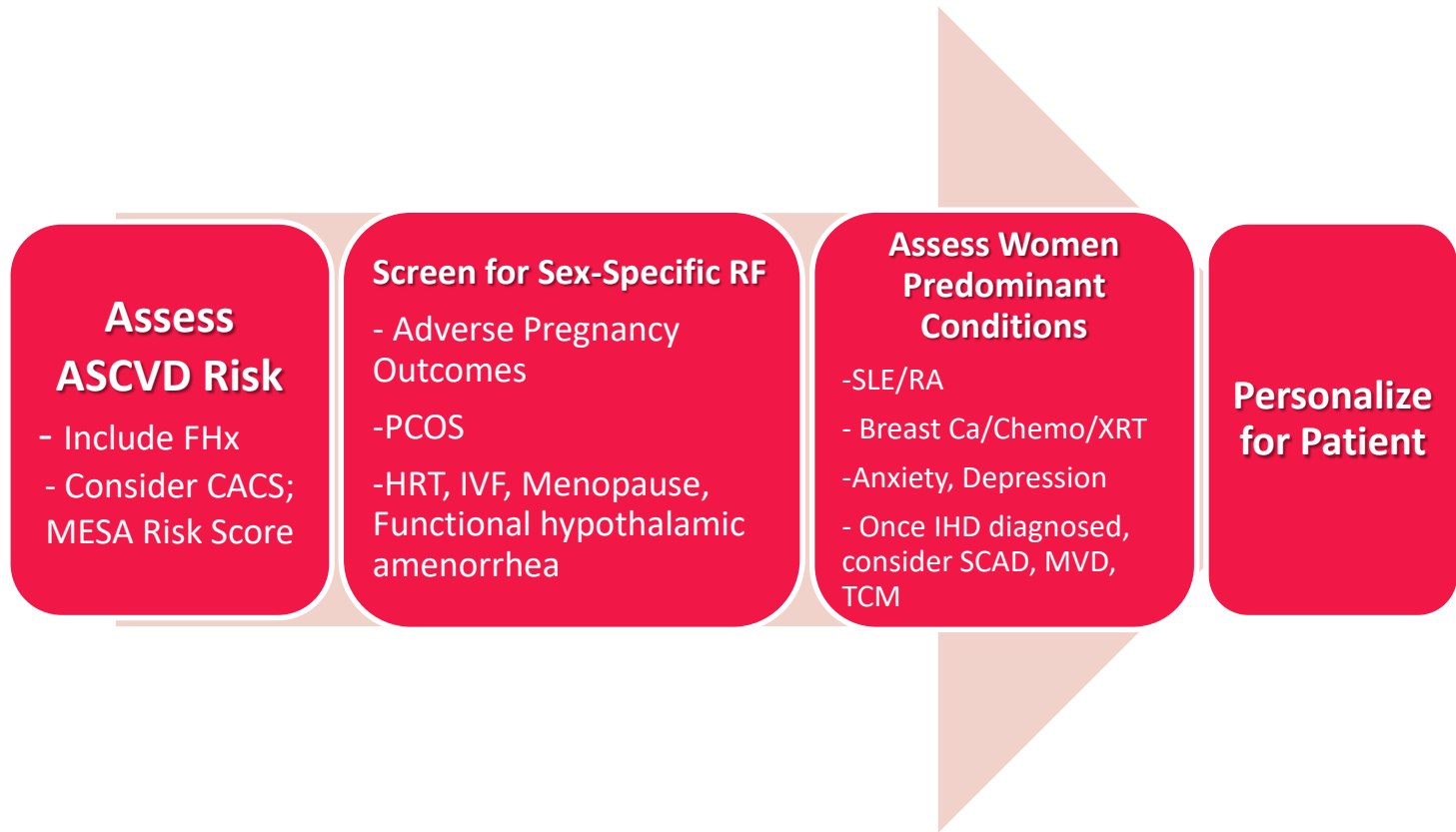
CAC Scoring is Helpful if You are at Intermediate Risk

Low Risk	Intermediate Risk	High Risk
<ul style="list-style-type: none">▪ Few risk factors▪ Low calculated risk of heart disease or stroke▪ No symptoms▪ No existing heart disease	<ul style="list-style-type: none">▪ May have several risk factors, but there is uncertainty about whether a statin should be started	<ul style="list-style-type: none">▪ Multiple risk factors

What should the approach be in WOMEN?



What Should the Approach be?



Women's Heart Health Program

The Dignity Health Women's Heart Health Program provides personalized care for the prevention, early detection and treatment of cardiovascular disease in women.

Clinical

- A dedicated expert to help provide insight into rare, female predominant conditions and best management/practice (**second opinion**)
- A centralized focus to point out and improve gaps in care and need for specialized care in women's health.
- A specialized program created to push for **collaboration** and interconnection with other specialties
 - Cardio-oncology, Cardio-rheumatology, Cardiac rehab, Maternal Heart Team

Research

- Gender specific research studies
- Increase enrollment of women in research

Community Partnership

- Partner with national organizations to increase awareness

Education and Health Literacy

- Women specific education materials
- Community outreach and heart health screenings throughout the year

Women's Heart Health

Heart Disease Risk Factor Checklist

Did you know that 90% of women have at least one risk factor for heart disease and that 80% of heart disease is preventable?

A risk factor is anything that increases your chance of getting heart disease, now or sometime in the future. It is important to know about the different types of risk factors.

- ✓ Take a few minutes to answer the following checklist to determine your risk.
- ✓ If you answered "Yes" to at least one risk factor, you'll benefit from seeing a cardiologist.

Risk factors that CANNOT be changed:

Family History
I have/had a female relative with heart disease before age 65. Yes No
I have/had a male relative with heart disease before age 55. Yes No

Age
I am 55 years or older. Yes No

Menstrual Cycle
I had early puberty (before age 12). Yes No
I had early menopause (before age 50). Yes No

Pregnancy Related Issues
During one or more pregnancies...
I had gestational diabetes (elevated blood sugar). Yes No
I had problems with high blood pressure. (Hypertension during pregnancy, pre-eclampsia, eclampsia). Yes No
I had a preterm delivery (prior to 37 weeks). Yes No

Breast Cancer Treatment
I am/has been treated for breast cancer with...
chemotherapy Yes No
radiation therapy Yes No



Let us help you find the right cardiologist.
Please Contact:
Sun State Cardiology
Phone: (480) 421-3000
Fax: (480) 421-3000
sunstatecardiology@gmail.com

Rheumatologic Conditions
I have been diagnosed with:
Rheumatoid Arthritis Yes No
Lupus Yes No
Other rheumatologic conditions Yes No

Risk factors that CAN be modified by early detection:

Blood Pressure
I am being treated for high blood pressure or my blood pressure was 150/90 or higher on two or more occasions. Yes No

Diabetes
I am being treated for diabetes or I have been told my blood sugar is high. Yes No

Cholesterol
My Cholesterol level:
HDL (good cholesterol) is less than 50 mg/dL (Low). Yes No
LDL (bad cholesterol) is more than 200 mg/dL (High). Yes No
Triglyceride is above 150 mg/dL (High). Yes No

Weight
I have a BMI (body mass index) of 25 or more. (To calculate your BMI, visit the American Heart Association website at www.heart.org and search BMI calculator). Yes No
My waist measurement is over 35 inches. Yes No

Smoking
I smoke(s) cigarettes or I live or work around people who smoke. Yes No

Wellness
I am NOT physically active for at least 30 minutes a day, most days of the week. Yes No
I suffer from anxiety, depression. Yes No

First Name: _____ Last Name: _____ Telephone: _____ Email: _____

The Women's Heart Health & Prevention Program provides personalized care that focuses on prevention, early detection and treatment of the number one cause of death in women: cardiovascular disease. Contact Sun State Cardiology for more information or to schedule an appointment: (480) 421-3000, sunstatecardiology@gmail.com or on form with your name and best contact information to (480) 421-3000 and we will be in touch with you.

Reference: American Heart Association, heartlung.org
Heart Lung & Blood Institute, nhlbi.nih.gov

Yoga of the Heart

Brought to you by the Women's Heart Health Program of Dignity Health

Every Tuesday | 12:00 -12:45 PM MST

Complimentary Zoom class with Lindsey Robertson, CCCE, CPFE

Learning stress management and body awareness is beneficial. If you are a woman with or at risk for heart disease, join us.

Learn about the scientific benefits of yoga:

- For the mind
- For the body
- For the heart

For more information and to RSVP, please contact

Lindsey.Robertson@DignityHealth.org



The Dignity Health East Valley WomenHeart Support Group

- ♥ Monthly patient-led meetings to provide support to women with or at risk for cardiovascular disease..
- ♥ Volunteers provide support through for in-hospital visits.
- ♥ Works closely with cardiac rehab to provide psychosocial support.
- ♥ If interested in enrolling your patient or obtaining more information.



Call 480-728-5414

to speak with our coordinator

Conclusions

- ♥ Cardiovascular disease is the leading cause of death across the world.
- ♥ Cardiovascular disease is largely preventable 80% of the time.
- ♥ Know your risk factors and manage them.
- ♥ Understand the symptoms.
- ♥ Work on the **Life's Simple 7 + Stress.**



Thank You.

For more information about women and heart health or to request a speaker,
Call: 602.406.3929.

Questions?



CONNECT WITH US



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Healthy Arizona Worksites Program



healthyazworksites.org



info@healthyazworksites.org



**THANK YOU
FOR WATCHING!**

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