



... tell a friend ...  
**women & heart disease**  
A PCNA CAMPAIGN

PCNA is the leading nursing organization dedicated to preventing cardiovascular disease through assessing risk, facilitating lifestyle changes, and guiding individuals to achieve treatment goals.



## Key Messages in the Campaign

- Heart disease is the #1 cause of death in women.
- Stroke is the #3 cause of death in women.
- Know the symptoms of heart attack and stroke, and seek medical attention promptly.
- **Know your numbers!**
  - Cholesterol profile
  - Blood pressure
  - Body mass index
  - Blood sugar



## Campaign Was Launched to Encourage Women to...

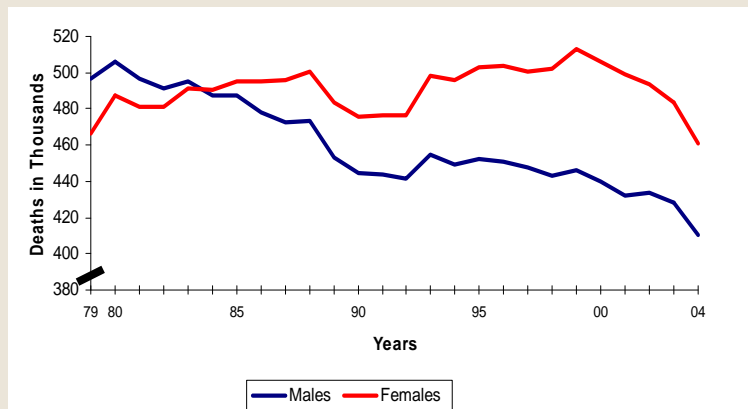
- Engage their healthcare providers in a dialogue about heart health.
- Share what they learn with their daughters, sisters, mothers, friends and co-workers.

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## CVD Mortality Trends in the US: 1979-2004

American Heart Association Heart Disease and Stroke Statistics  
2008 Update

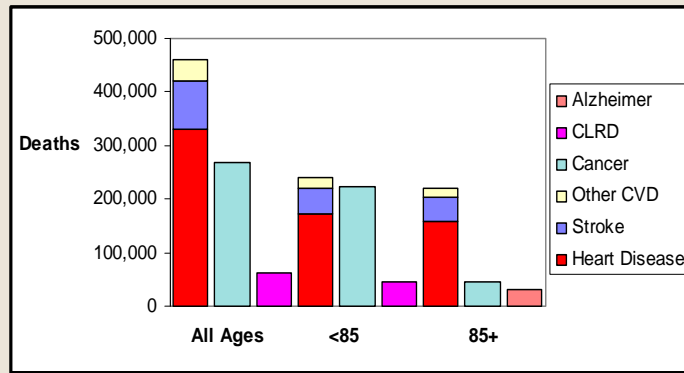


Source: NCHS and NHLBI

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## CVD and Other Major Causes of Death: Females



(United States: 2004)

Source: NCHS and NHLBI

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## Are Women Aware ?

- Percentage of women aware that heart disease is the leading cause of death in women:
  - 1997: 30%
  - 2000: 34%
  - 2003: 46%
  - **2007: 59%**
- In the latest survey, only **13%** viewed heart disease as their leading health concern.
- There is a gap in women personalizing the messages.
- Awareness levels are lower in Black and Hispanic women, who are often at even higher risk because of the prevalence of blood pressure and diabetes.



Source: CDC/NCHS

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## Heart Attack Outcomes in Women

- In the first year after a heart attack:
  - Men have a 25% mortality rate
  - Women have a 38% mortality rate
- The gap is even larger in younger patients: women <50 have 2x the death rate as men the same age
- Many reasons have been suggested for this
  - Do women receive the same level of care?
  - Do recommended treatments work as well in women?

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## What is Being Done?

- Guidelines for government-sponsored research now require:
  - Representation of women and minorities in clinical research studies
  - Reporting gender differences in outcomes
- VIRGO Study
  - NIH study launched in Spring 2008
  - 2,000 women  $\leq 55$  and 1,000 men for comparison
  - Carefully study outcomes in young (<55) women with heart attack

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## Preventive Cardiology in Women

- Women have a low, intermediate, or high risk for heart attack depending on their risk factors.
- Depending on level of risk, more aggressive cardiovascular risk reduction strategies are recommended including lifestyle and medications.
- The same factors that put you at high risk for a heart attack also put you at high risk for a stroke.

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## Risk Factors for Heart Disease

### Modifiable

- Physical Inactivity
- Psychosocial Factors
- High Blood Pressure
- Obesity
- Diabetes
- High Cholesterol and Triglycerides, Low HDL
- Cigarette Smoking and exposure to secondhand smoke
- Diet high in saturated fat and calories and low in fresh fruits, vegetables, whole grains & fish

### Non-modifiable

- Age
- Family history
- Gender

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## Recognizing High Blood Pressure

- More men than women have hypertension until age 55.
- A person who has a normal blood pressure at age 55 has a 90% lifetime chance of developing hypertension.
- High blood pressure is called the “silent killer” as it generally has no symptoms.

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## Benefits of Lowering Blood Pressure

Reduces the chance of:

- Stroke: 35-40 %
- Heart Attack: 20-25 %
- Heart Failure: 50 %

Source: American Heart Association website: [www.americanheart.org](http://www.americanheart.org)

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## Classification of Blood Pressure

- Optimal: <120 systolic and <80 diastolic
- Pre-Hypertension: 120-139 systolic or 80-89 diastolic
- Stage 1 Hypertension: 140-159 systolic or 90-99 diastolic
- Stage 2 Hypertension: >160 systolic or >100 diastolic

Source: National Heart, Lung, and Blood Institute – Joint National Committee 7

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## Lifestyle Modification

Modification	Recommendation	Systolic Reduction (expected)
Weight reduction	Goal of BMI 18-25 Waist <35inches	5-20 mm Hg per 10kg wt loss
DASH	Fruits, vegetables, low-fat dairy products, less fat	8-14 mm Hg
Sodium restriction	<2.4 g every day	2-8 mm Hg
Physical activity	30 mins of aerobic 4x per week	4-9 mm Hg
Reduced ETOH	1 serving per day	2-4 mm Hg

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## The Cholesterol (Lipid) Profile

### Know Your Numbers (all of them)!

- Total Cholesterol Goal: < 200 mg/dL
- Low Density Lipoprotein Cholesterol: < 100 mg/dL (LDL Goal)
- Triglycerides Goal: < 150 mg/dL
- High Density Lipoprotein Cholesterol: > 50 mg/dL (HDL Goal for Women)

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## Treatment Goals

Risk Category	LDL-C Goal (mg/dL)	Consider TLC when LDL-C (mg/dL)	Consider Drug Therapy when LDL-C (mg/dL)
<b>CHD/CHD risk equivalents (10-year risk &gt;20%)</b>	<b>&lt;100</b>	<b>≥100</b>	<b>≥130</b> (100-129: drug optional)
Optional level for very high risk women	< 70		
<b>2+ risk factors (10-year risk ≤20%)</b>	<b>&lt;130</b>	<b>≥130</b>	<b>10-year risk 10%-20%: ≥130</b> <b>10-year risk &lt;10%: ≥160</b>
<b>0-1 risk factor (10-year risk &lt;10%)</b>	<b>&lt;160</b>	<b>≥160</b>	<b>≥190</b> (160-189: drug optional)

Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. *JAMA*. 2001;285:2486-2497.

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## Evaluating an Abnormal Lipid Profile

- LDL cholesterol is the main target of treatment
- Second focus is triglyceride and HDL
- Lifestyle is the key:
  - Dietary changes: diet low in fat, trans fats, and cholesterol
  - Regular exercise: 30 minutes daily, 60-90 minutes for weight loss/maintenance
  - Achieve and maintain ideal weight
- Depending on level of risk, medication may be initiated along with diet.
- Women who are pregnant, nursing, or who may become pregnant should not be prescribed cholesterol-lowering medications.

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## Women and Diabetes

- Type 2 diabetes has increased 50% in the last 10 years.
- 2 out of 3 people with diabetes die of heart disease and stroke.
- Diabetes increases a woman's risk of heart disease by 3-7 times (2-3 times in men).
- People with diabetes should be treated as aggressively as those with known heart disease.
  - Management of blood pressure
  - Management of cholesterol
  - Avoidance of tobacco products
- Women with Type 2 Diabetes develop heart disease at a much younger age compared to non-diabetic women.

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## American Diabetes Association Guidelines

- Optimal fasting blood sugar < 100 mg/dL
- Impaired fasting glucose 100 - 125 mg/dL:  
also called “prediabetes”
  - Women in this category can benefit greatly by making changes in their diet and increasing physical activity
- Criteria for diabetes
  - Fasting glucose 126 mg/dL or higher

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## Lifestyle and Diabetes

- Research shows that diabetes can be prevented, or at least postponed, by improving diet, losing weight, and increasing physical activity levels.
- People at risk for diabetes who follow a diet and exercise plan (with only a modest weight loss) can decrease their risk of developing diabetes by more than 50%.

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## The Metabolic Syndrome

- Certain risk factors for heart disease tend to cluster together and markedly increase your risk for Type 2 Diabetes and heart disease:
  - Overweight, especially when carried around the waist
  - High blood pressure
  - Cholesterol abnormalities (low HDL/high triglycerides)
  - Elevated blood glucose
- People with these risk factors need to be treated very aggressively for heart disease prevention - lifestyle changes are key!

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## Tobacco - #1 Preventable Risk

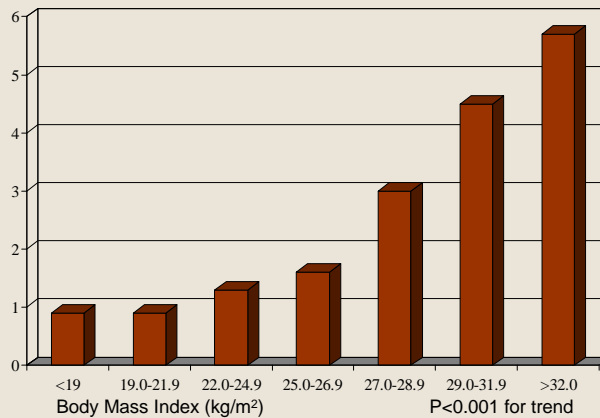
- Female smokers have **2-6 times** the risk of sudden cardiac death than non-smokers. The risk is higher for heavy smokers.
- Second-hand smoke increases cardiac risk.
- The health benefits of quitting smoking begin immediately.
- Many people who quit smoking successfully have tried and failed many times.
- Talk to your doctor about how to stop smoking. Nicotine replacement or prescription medications may be helpful.
- Call your local hospital or lung association and ask about low cost or free programs to help you or someone you care about stop smoking.

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## Obesity and Coronary Heart Disease Mortality

Nurses' Health Study: Women who never smoked



Source: Manson JR, et al. N Engl J Med. 1995;333:677-685.

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## Overweight and Obesity

- Growing epidemic in U.S.
- Being overweight increases risk of :
  - High blood pressure
  - Cholesterol abnormalities
  - Diabetes
- Physical activity recommendations for women who need to lose weight or sustain weight loss have been added:
  - Minimum of 60–90 minutes of moderate-intensity activity daily
  - Brisk walking is perfect
- All women should reduce saturated fats intake to less than 7 % of calories if possible.

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## Calorie Intake and Expenditure

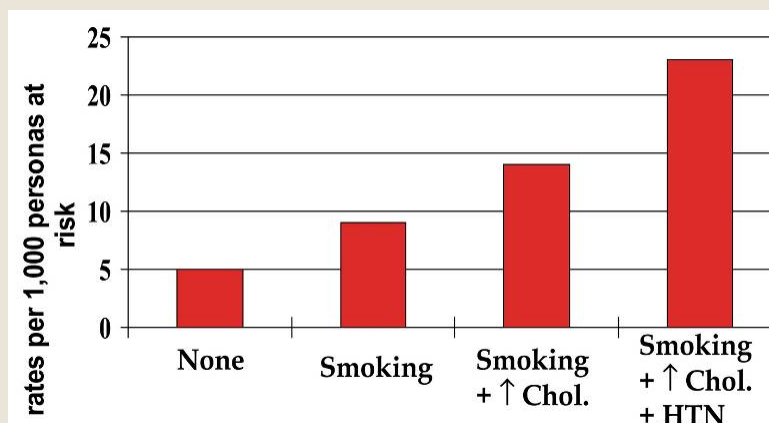
### Modest decreases in calorie intake and increases in calorie expenditure make a difference!

- Choose fat free over whole milk
- Park further from the store and walk
- When eating in a restaurant, share an entrée or save ½ for tomorrow
- Wear a pedometer and count the steps taken throughout your day, then work to increase this gradually
  - 2000 steps = 1 mile
- Walk to a co-workers desk instead of e-mailing

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## Multiple Risk Factors in Women



Source: N Engl J Med. Stampfer, MJ. 2000; 343: 16-22.

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## Postmenopausal Hormone Therapy

- **Postmenopausal Hormone Therapy (HT) is no longer recommended as a strategy to prevent heart disease.**
- Large research trials have failed to demonstrate that HT lowers heart risk and it may increase stroke risk.
- Women should focus on the proven strategies to improve heart health.
- Hormone therapy, generally short term, may still be used to treat the symptoms of menopause - this is a decision between a woman and her healthcare provider.

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## Where Does Exercise Come In?

### **EVERYWHERE!**

- Exercise helps lower blood pressure.
- Exercise helps prevent diabetes.
- Exercise helps lower LDL (bad cholesterol) and raise HDL (good cholesterol).
- Exercise helps weight management.
- Exercise helps manage stress.
- Exercise helps bone health.

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## Symptoms of a Heart Attack Require Immediate Action!

- Common symptoms may include:
  - Uncomfortable pressure, fullness, burning or squeezing sensation in the chest
  - Pain in the chest, neck, arms, or back
  - Unusual shortness of breath
  - Nausea, vomiting, dizziness, sweating
  - Unusual fatigue
- You may not feel all of these symptoms

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## Symptoms of a Heart Attack Require Immediate Action!

- Symptoms can vary greatly from one person to another and may be more subtle than what is portrayed on TV and in movies
- Symptoms may be somewhat different in women than men
- You know your body - trust your instincts!
- Activate the emergency medical system
- Call 9-1-1
- Emergency treatment that can limit the amount of heart muscle damage must be started quickly

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## Stroke Symptoms

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

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## Stroke Symptoms: What to do

- A stroke is a ***brain attack***
- Emergency treatment that can limit the amount of brain damage must be started quickly
- Activate the emergency medical system
- Call 9-1-1
- It is not usually the person experiencing the stroke that calls 9-1-1

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## Internet Resources

- **National Heart Lung and Blood Institute** [www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)  
(information about cholesterol and blood pressure)
- **Heart Truth Campaign**  
[www.nhlbi.nih.gov/health/hearttruth/](http://www.nhlbi.nih.gov/health/hearttruth/)
- **American Heart Association (AHA)**  
[www.americanheart.org](http://www.americanheart.org)
- **AHA Go Red for Women**  
[www.goredforwomen.org](http://www.goredforwomen.org)
- **WomenHeart: National Coalition for Women with Heart Disease**  
[www.womenheart.org](http://www.womenheart.org)
- **Small Step**  
[www.smallstep.gov](http://www.smallstep.gov)
- **Preventive Cardiovascular Nurses Association**  
[www.pcna.net](http://www.pcna.net)

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## In Summary...

- Know the symptoms of heart attack and stroke.
- Know your risk factors for heart disease.
- Work with your healthcare provider to reduce your risk
  - Avoid tobacco products and secondhand smoke
  - Have your blood pressure and cholesterol profile (and blood sugar if at risk for diabetes) measured
  - Follow your healthcare provider's advice to manage these with lifestyle changes and medication if needed
  - Eat a heart healthy diet - low in fat and salt
  - Exercise- walking is ideal - 30 minutes every day
- Tell a Friend!

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... tell a friend ...  
women & heart disease  
A PCNA CAMPAIGN

*Tell a friend... a coworker, a neighbor, a sister*

**About Women and Heart Disease**