Heart Disease in Alabama

Satellite Conference and Live Webcast
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Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division

Faculty

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What We Will Cover

- Burden
- High risk factors
- Disparity
- Quality issues
- Guideline recommendations

Cardiovascular Diseases Are the Number 1 Killer of Women

- 40% of women die from heart disease or stroke
- Two-thirds of women who have heart attacks never fully recover
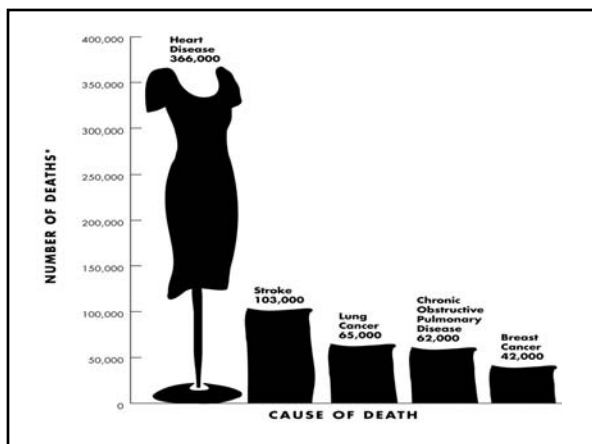
What Is Ideal Cardiovascular Health?

- Absence of disease
- Favorable levels of health factors
- Favorable health behaviors

What Are Some of the Causes of Cardiovascular Disease?

- **Genetics**
- **Age**
- **Sex**
- **Obesity**
- **High blood pressure**
- **High cholesterol**
- **Lack of physical activity**

B: Blood Pressure

Hypertension

2010 High Blood Pressure Statistics

- **One in three adults has high blood pressure**
- **High blood pressure cost the United States $7.6 billion in health care services, medications, and missed days of work**

2010 High Blood Pressure Statistics

- **Of all the people with high blood pressure:**
  - **68% were under current treatment**
  - **44% had it under control**
  - **56% percent did not have it controlled**

2010 High Blood Pressure Statistics

- **Non-Hispanic blacks are more likely to suffer from high blood pressure than are non-Hispanic whites**
- **Based on the BFRSS, in Alabama 37% of adults have been told they have high blood pressure**

2010 High Blood Pressure Statistics

- Within the African American community, those with the highest rates of hypertension, are more likely to be middle aged or older, less educated, overweight or obese, physically inactive, and to have diabetes

2010 High Blood Pressure Statistics

- More than one in five (22.4%) people with high blood pressure don't know that they have it

Benefits of Blood Pressure Management

- ↓ 35% to 40% stroke
- ↓ 20% to 25% heart attacks
- ↓ 50% heart failure

High Blood Pressure Classification

Category	Measurement
Normal	<120/80
Pre-hypertension	120-139/80-89
Hypertension	>140/90

Obtaining an Accurate Reading

- Advise the patient to refrain from a large meal for 2 hours before evaluation and to avoid drinking alcohol, smoking, or chewing tobacco for 30 minutes before the reading

Obtaining an Accurate Reading

- Measure the patient's mid arm circumference (MAC) and place the appropriate size cuff on the arm
  - Blood pressure in both arms should be measured initially

Obtaining an
Accurate Reading

- **Have the patient sit comfortably for at least 5 minutes in a straight-backed chair in a quiet room, with the arm supported at heart level**
  - **The legs should remain uncrossed with feet flat on the floor**

Factors Affecting
Blood Pressure Variability

- **Measurement factors:**
  - **The observer**
  - **The equipment**
  - **The technique**
- **Biologic factors:**
  - **Related to the patient**

Factors Affecting
Blood Pressure Variability

- **Short-term variability at rest:**
  - **Related to heart and respiratory rate, influenced by the autonomic nervous system and baroreflexes controlling heart rate and blood vessel peripheral resistance**

Factors Affecting
Blood Pressure Variability

- **Daytime variability can be related to patient's <u>mental activity</u> (stress, anxiety, distractions in room, what patient feels that she/he needs to tell the doctor, etc); and <u>physical activity</u> prior to the reading**

Blood Pressure

- **Measures the force of blood being pumped from your heart throughout your body**
- **The higher your blood pressure, the harder the heart has to work in order to keep the blood flowing**

Blood Pressure

- **High blood pressure or hypertension puts you at greater risk for diseases such as heart attacks, heart failure, kidney failure, and strokes**

Blood Pressure Measurement

- **Systolic blood pressure**
  - Measure of BP when heart is beating
- **Diastolic blood pressure**
  - Measure of BP when heart is at rest

Blood Pressure Measurement

Systolic	124
Diastolic	72

Risk Factors

- Age
- Race
- Family history
- Overweight and obesity
- Diabetes
- Tobacco use
- Alcohol use
- High cholesterol
- Lack of exercise

Lifestyle Modification and Blood Pressure Management

- **Diet**
  - Low fat and sodium
- **Exercise**
  - 30 minutes most days of the week
- **Weight**
  - Maintain a healthy weight

Lifestyle Modification and Blood Pressure Management

- **Habits**
  - Avoid smoking, drinking, and physical inactivity
- **Medications**
  - Take as prescribed
- **Healthcare decision making**
  - Be active in your healthcare

Digital Blood Pressure Monitors

- **Digital monitors are easier to read**
- **Use a clinically approved monitor for best results**

Dietary Approach to Stop Hypertension (DASH Diet)

C: Cholesterol – Preventing Atherosclerosis

2010 High Blood Cholesterol and Other Lipids

- 102.2 million Americans age 20 and older have total blood cholesterol levels of 200 mg/dl or higher
  - 47.7 million men
  - 54.5 million women

2010 High Blood Cholesterol and Other Lipids

- 35.7 million have total blood cholesterol levels of 240 mg/dl or higher
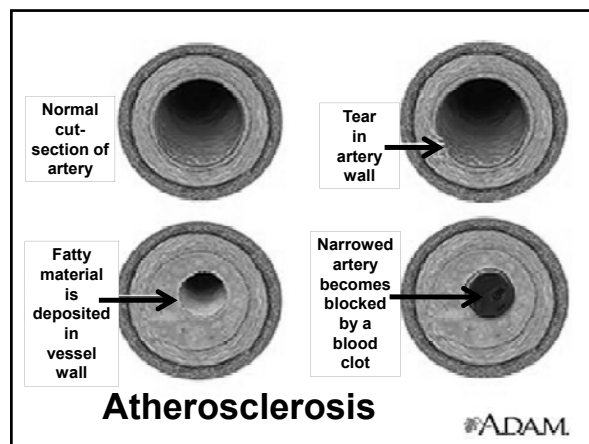 - 15.9 million men
  - 19.7 million women

Hyperlipidemia

C: Cholesterol

- Over time, this buildup causes "hardening of the arteries" so that arteries become narrowed and blood flow to the heart is slowed down or blocked
- The blood carries oxygen to the heart, and if enough blood and oxygen cannot reach your heart, you may suffer chest pain or a heart attack

C: Cholesterol

- If the blood supply to a portion of the heart is completely cut off by a blockage, the result is a heart attack

| Normal cut-section of artery | Tear in artery wall |
| Fatty material is deposited in vessel wall | Narrowed artery becomes blocked by a blood clot |

Atherosclerosis

Risk Factors for High Cholesterol

- Age
  - Men > 55
  - Women > 65
- Family history of heart disease
- High blood pressure
- Overweight and obesity
- Lack of exercise

Measuring Your Cholesterol

- Everyone age 20 and older should have their cholesterol measured at least once every 5 years
- It is best to have a blood test called a "lipoprotein profile" to find out your cholesterol numbers
  - Test is done after a 9-12 hour fast and gives information about different cholesterol in your blood

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Measuring Your Cholesterol

- American Academy of Pediatrics recommends a cholesterol test only for children between the ages of 2 and 10 who have a known family history of high cholesterol or premature coronary artery disease

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Measuring Your Cholesterol

- American Academy of Pediatrics recommends treating high cholesterol in children with prescription drugs, such as statins, for children age 8 and older if a child has a high level of low-density lipoprotein (LDL or "bad") cholesterol

Total Cholesterol Level

Category	Measurement
High	>240 mg/dL
Borderline high	200-239 mg/dL
Lower risk	<200 mg/dL

LDL Cholesterol Level

Category	Measurement
Optimal	<100 mg/dL
Near or above optimal	100-129 mg/dL
Borderline high	130-159 mg/dL
High	160-189 mg/dL
Very high	>190 mg/dL

HDL Cholesterol Level

Category	Measurement
Major risk	<40 mg/dL (men) <50 mg/dL (women)
Lower risk	>60 mg/dL

Triglyceride Level

Category	Measurement
Normal	<150 mg/dL
Borderline high	150-199 mg/dL
High	200-499 mg/dL
Very high	>500 mg/dL

Saturated Fats

- A fat, most often of animal origin, that is solid at room temperature and whose fatty acid chains cannot incorporate additional hydrogen atoms
- An excess of these fats in the diet is thought to raise the cholesterol level in the bloodstream

Trans-fatty Acids

- A fatty acid produced by hydrogenating an unsaturated fatty acid
  - Changing its shape
- Found in processed foods such as margarine and fried foods, puddings and commercially baked goods, and partially hydrogenated vegetable oils

Healthy Diet
(4-5 Dietary Goals Met)

1. Fruits and vegetables

   – ≥ 4.5 cups per day

2. Fish (preferably oily)

   – ≥ 2 3.5-oz servings per week

3. Fiber-rich whole grains (1.1 grams fiber per 10 grams carbohydrate)

   – ≥ 3 1-oz-equivalent servings per day

Healthy Diet
(4-5 Dietary Goals Met)

4. Sodium

   – <1,500 mg per day

5. Sugar-sweetened beverages

   – ≤450 kcal (36 oz) /week

Other Dietary Measures

1. Saturated fat

   – < 7% of total energy intake

2. Nuts, legumes, and seeds

   – ≥ 4 servings/week

3. Processed meats

   – ≤ 2 servings/week

Managing Risks

- Eat a diet low in saturated fat
- Maintain a healthy weight
- Exercise regularly
- Avoid alcohol
- Avoid tobacco

Managing Risks

- Have your cholesterol checked every 5 years beginning at age 20
- If you have diabetes or other risk factors, keep LDL <100

Life's Simple 7

1. Never smoked or quit more than one year ago

2. Body mass index less than 25 kg/m^2

3. Physical activity of at least 150 mins (moderate intensity) or 75 mins (vigorous intensity) each week

4. Four to five key components of a healthy diet consistent with current AHA guidelines

Life's Simple 7

5. Total cholesterol of less than 200 mg/dL

6. Blood pressure below 120/80 mm Hg

7. Fasting blood glucose less than 100 mg/dL

Obstacles to Success

- We know what to do, but . . .

- Lack of public awareness about the debilitating, costly effects of cardiovascular disease and stroke

- Persons do not know the warning signs of heart attack and stroke