Reducing Your Risk of Cardiovascular Disease and Cancer
Cardiovascular Disease: An Overview

- Cardiovascular disease (CVD) describes diseases of the heart and blood vessels, such as high blood pressure, coronary heart disease (CHD), heart failure, stroke, and congenital defects.
- CVD is the cause of over 33 percent of all deaths in the United States.
- The American Heart Association now focuses more on ideal cardiovascular health (ICH) rather than mortality rates and the disease process.
ICH is defined as the absence of clinical indicators of CVD and the presence of the these behavioral and health factor metrics:

– Behaviors:
  • Not smoking
  • Sufficient physical activity
  • A healthy diet pattern
  • An appropriate energy balance and normal body weight
Cardiovascular Disease: An Overview (cont.)

– Health factors:
  • Having optimal total cholesterol without medication
  • Having optimal blood pressure without medication
  • Having optimal fasting blood glucose without medication
Prevalence of Cardiovascular Diseases in Adults Aged 20 and Older by Age and Sex

- 20–39 years old: 12.8% Men with CVD, 10.1% Women with CVD
- 40–59 years old: 40.0% Men with CVD, 34.4% Women with CVD
- 60–79 years old: 70.2% Men with CVD, 70.9% Women with CVD
- 80 years old and older: 83.0% Men with CVD, 87.1% Women with CVD

Each heart symbol represents 10% of the population.
Understanding the Cardiovascular System

• The cardiovascular system includes the heart, arteries, arterioles (small arteries), veins, venules (small veins), and capillaries (minute blood vessels).
  
  – **Atria** are the heart's two upper chambers, which receive blood.
  
  – **Ventricles** are the heart's two lower chambers, which pump blood through the blood vessels.

  – **Arteries** carry oxygenated blood away from the heart except for the pulmonary arteries, which carry deoxygenated blood to the lungs.

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Understanding the Cardiovascular System (cont.)

- **Arterioles** are branches of arteries.
- **Veins carry** blood back to the heart from other regions of the body.
- **Venules** are branches of veins.
- **Sinoatrial node** is a cluster of electric pulse-generating cells that serves as a natural pacemaker for the heart.
The Heart: A Mighty Machine

• **Components**
  – Four chambers
    • Two upper chambers are called atria.
    • Two lower chambers are called ventricles.

• **Valves** regulate the flow of blood.

• **Heart Function**
  – Deoxygenated blood enters the right atrium.
  – From the right atrium, blood travels to the right ventricle.
  – Blood is pumped through the pulmonary artery to the lungs, where it receives oxygen.
The Heart: A Mighty Machine (cont.)

- Oxygenated blood from the lungs returns to the left atrium of heart.
- Blood from the left atrium moves into the left ventricle.
- The left ventricle pumps blood through the aorta to all body parts.
1. Deoxygenated blood flows into the right atrium from the superior and inferior vena cavae.

2. Blood moves from the right atrium into the right ventricle; from there it is pumped through the pulmonary arteries into the lungs.

3. Blood picks up oxygen and discards carbon dioxide in the lungs; it then goes through the pulmonary veins into the left atrium.

4. Oxygenated blood is forced from the left atrium into the left ventricle; from there it is pumped through the aorta into the rest of the body's blood vessels.
Prevalence of Heart Attack Deaths among U.S. Adults

Death rates per 100,000 population:

- 3.3% (10 states)
- 3.3%–3.5% (9 states)
- 3.6%–3.9% (12 states)
- 4.0%–4.2% (10 states)
- ≥4.3% (10 states)
Cardiovascular Diseases

• Hypertension
  – Systolic blood pressure is the upper number in the fraction that measures blood pressure, indicating pressure in the walls of the arteries when the heart contracts.
  – Diastolic blood pressure indicates pressure in the walls of the arteries during the relaxation phase of heart activity.
# Blood Pressure Classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Systolic Reading (mm Hg)</th>
<th>Diastolic Reading (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Less than 120</td>
<td>and Less than 80</td>
</tr>
<tr>
<td>Prehypertension</td>
<td>120–139</td>
<td>or 80–89</td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 1</td>
<td>140–159</td>
<td>or 90–99</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Greater than or equal to 160</td>
<td>or Greater than or equal to 100</td>
</tr>
</tbody>
</table>

**Note:** If systolic and diastolic readings fall into different categories, treatment is determined by the highest category. Readings are based on the average of two or more properly measured, seated readings on each of two or more health care provider visits.

Cardiovascular Diseases (cont.)

• **Atherosclerosis (CAD—coronary artery disease)**
  - Arteriosclerosis
  - Hyperlipidemia
  - Inflammatory risk

• **Peripheral Artery Disease (PAD)**
  - Atherosclerosis occurring in the lower extremities, such as in the feet, calves, legs, or in the arms
Cardiovascular Diseases (cont.)

• **Coronary Heart Disease (CHD)**
  – Greatest killer, causing nearly 1 in every 6 deaths in the United States
  – Over 1 million new and recurrent heart attacks (myocardial infarctions) occur each year.
  
  • Brought on by a blood clot in a coronary artery or an atherosclerotic narrowing that blocks an artery
  
  • When blood does not flow readily, there is a decrease in corresponding oxygen flow.
Cardiovascular Diseases (cont.)

- **Angina Pectoris**
  - Occurs when there is not enough oxygen to supply the heart muscle, resulting in chest pain or pressure.
  - Mild cases may be treated with rest.
  - Drugs can dilate veins and provide pain relief.
  - Calcium channel blockers can relieve cardiac spasms.
  - Beta-blockers control potential overactivity of the heart muscle.
Cardiovascular Diseases (cont.)

• **Arrhythmias**
  – An irregularity in the heart rhythm that occurs when the electrical impulses that coordinate heartbeat don't work properly.
  – Tachycardia is an abnormally fast heart beat.
  – Bradycardia is an abnormally slow heart beat.
Heart Failure

- Congestive heart failure occurs when the heart muscle is damaged or overworked and lacks the strength to keep blood circulating normally through the body, and blood and fluids back up into the lungs and other body tissues.

- Fluid accumulation often occurs in the feet, ankles, and legs, and is accompanied by shortness of breath and tiredness.
• **Stroke (cerebrovascular accident)**
  – Seven million Americans suffer strokes every year; almost 129,000 people die each year from strokes.
  – Blood supply to brain is interrupted.
  – Transient ischemic attacks (TIAs) are brief interruptions of the blood supply to the brain that cause temporary impairment.
  • Symptoms include dizziness, weakness, temporary paralysis or numbness in face or other regions, temporary memory loss, blurred vision, slurred speech, and others.
ABC News Video: Stroke in Young Adults

Discussion Questions

• According to the video, what are signs and symptoms associated with stroke? How can you quickly diagnose stroke in someone?

• What happens physiologically during a stroke?

• What are common causes for strokes in young adults?

• Why is it important to correctly diagnose strokes quickly in young adults? What occurs following strokes that may impact the quality of life?
Reducing Your Risks

• Research shows a strong association between CVD problems and obesity, exposure to smoking, lack of physical activity, high cholesterol, diabetes, high blood pressure, and genetics.

• Cardiometabolic risks are the combined risks that indicate physical and biochemical changes that can lead to these major diseases.
Metabolic Syndrome

• **Quick Risk Profile**
  
  – For a diagnosis of metabolic syndrome, a person would have three or more of the following risks:
  
    • Abdominal obesity
    • Elevated blood fat (triglycerides greater than 150 units)
    • Low levels of HDL ("good") cholesterol
    • Elevated blood pressure greater than 130/85 mm Hg
    • Elevated fasting glucose greater than 100 mg/dL
Reducing Your Risks (cont.)

• Modifiable Risks
  – Avoid tobacco.
  – Cut back on saturated fats and cholesterol.
    • Reduce low-density lipoproteins (LDL).
    • Increase high-density lipoproteins (HDL).
    • Reduce triglycerides.
  – Maintain a healthy weight.
  – Exercise regularly.
  – Control diabetes.
  – Control blood pressure.
  – Manage stress.
ABC News Video: Importance of Heart Health in Your Youth

Discussion Questions

• What are the benefits and drawbacks of Americans only sticking to the checklist presented in the video to determine heart health and risk factors?

• What other risk factors might the checklist ignore with respect to determinants of heart health?

• What other factors would you add to the risk factors? Discuss the impact of healthy lifestyle, weight management, and age on heart health.
Reducing Your CVD Risks

• **Nonmodifiable Risks**
  – Race and ethnicity
  – Heredity
  – Age
  – Gender

• **Other Risk Factors Being Studied**
  – Inflammation and C-reactive protein
  – Homocysteine
Discussion Questions

• What are the characteristics of a Mediterranean diet that can reduce the risk for heart disease by 30%?

• What dietary recommendations would you give to someone who wants to reduce their risk for heart disease?

• What methods can be used to increase intake of protein rich foods and healthy fats?
Weapons against Cardiovascular Disease

- Statin drugs
  - Chemicals that lower blood cholesterol levels
- Ace inhibitors
  - Cause muscles surrounding the heart to contract, thereby lowering blood pressure
- Beta-blockers
  - Reduce blood pressure by blocking the effects of epinephrine
- CPR
Techniques for Diagnosing Cardiovascular Disease

- Electrocardiogram (ECG)
- Angiography
- Positron emission tomography (PET) scan
- Magnetic resonance imaging (MRI)
- Ultrafast computed tomography (CT) scan
- Cardiac calcium score
Bypass Surgery, Angioplasty, and Stents

• Coronary bypass surgery helps patients who suffer from coronary blockages or heart attacks.
• In bypass surgery, a blood vessel is taken from another site in the patient's body and implanted to "bypass" blocked coronary arteries.
• Angioplasty uses a balloon to open the artery to allow blood to flow more freely.
• Angioplasty carries fewer risks and may be more effective in selected cases than bypass surgery.
• Stents may be inserted to prop open an artery.
Aspirin and Other Drug Therapies

- Aspirin has blood-thinning properties.
- Benefits of aspirin may reduce the risks for future heart attacks among those who have already had a myocardial infarction (MI) event.
- It may increase risk for gastrointestinal bleeding and stroke in those that take it daily.
- Thrombolysis can be performed if a victim reaches the emergency room quickly enough.
Cancer: An Overview

• Cancer is the second leading cause of death in the United States.
• Five-year survival rates are up dramatically.
• Each year, 1.7 million new cases are diagnosed; 68 percent will be alive 5 years from now.
• Remission means the cancer is responding to treatment and is under control.
• Patients who are cured show no subsequent cancer in their bodies and can expect to live a long and productive life.
What Is Cancer?

• Uncontrolled growth and abnormal cellular development results in a neoplasm.
• Benign tumors are harmless and consist of ordinary-looking cells enclosed in a fibrous shell or capsule that prevents them from spreading.
• Malignant tumors are not enclosed in a shell and can spread to other organs in a process called metastasis. Malignant cells disrupt RNA and DNA, producing mutant cells.
Metastasis

1. Genetically altered skin cell
2. Cell divides more rapidly than normal
3. Cells change form
4. In situ cancer: Cells stay in one place
5. Malignant tumor (cancer): Cancer cells invade normal tissue and enter blood and lymph; metastases form at the distant sites
What Is Cancer (cont.)

- Cancer Staging
  - Cancers are typically staged based on the size of the tumor, how deeply it has penetrated, the number of lymph nodes that are affected, and the degree of metastasis.
<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Early cancer, when abnormal cells remain only in the place they originated.</td>
</tr>
<tr>
<td>I</td>
<td>Higher numbers indicate more extensive disease: Larger tumor size and/or spread of the cancer beyond the organ in which it first developed to nearby lymph nodes and/or organs adjacent to the location of the primary tumor.</td>
</tr>
<tr>
<td>II</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Cancer has spread to other organs.</td>
</tr>
</tbody>
</table>
What Causes Cancer?

- **Acquired (environmental) Risks**
  - Tobacco use
  - Poor nutrition, physical inactivity, and obesity
  - Stress and psychosocial risks
  - Inflammation, certain infectious agents, certain medical treatments
  - Drug and alcohol consumption
  - Excessive sun exposure and exposure to carcinogens
What Causes Cancer? (cont.)

• Genetic and Physiological Risks
  – Genetic predisposition
  – *Oncogenes*—cancer-causing genes that typically stay dormant but can be activated
  – Hereditary disposition

• Reproductive and Hormonal Risks
  – Reproductive factors on breast and cervical cancers are well documented.
What Causes Cancer? (cont.)

• Alcohol and Cancer Risks
  – Even three drinks per week are associated with increased risk for oral, esophagus, and breast cancer in women.
  – With heavy drinking, incidence rises dramatically for oral, esophagus, stomach, colon, liver, and pancreatic cancers.

• Inflammation and Cancer Risks
  – An emerging theory is that inflammatory responses play a role in cancer development.
What Causes Cancer? (cont.)

• Occupational and Environmental Risks
  – Exposure to asbestos, nickel, chromate, benzene, arsenic, and vinyl chloride
  – Exposure to radioactive substances
  – Radiation
  – Chemicals in foods

• Infectious Diseases and Cancer
  – Hepatitis B and hepatitis C can cause liver cancer.
  – Human papillomavirus can cause cervical cancer.
Types of Cancer

• Categories of Cancer
  – Carcinomas
    • Epithelial tissues are the most common cancer sites.
  – Sarcomas
    • Sarcomas occur in the mesodermal or middle layers of tissues such as bones, muscles, and general connective tissues.
  – Lymphomas
    • Develop in the lymphatic system
  – Leukemias
    • Cancers of the blood-forming parts of the body
Leading Sites of New Cancers Cases and Deaths, 2013 Estimates

<table>
<thead>
<tr>
<th>Estimated New Cases of Cancer*</th>
<th>Estimated Deaths from Cancer*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female</strong></td>
<td><strong>Male</strong></td>
</tr>
<tr>
<td>Breast</td>
<td>Lung &amp; bronchus</td>
</tr>
<tr>
<td>232,340 (29%)</td>
<td>72,220 (26%)</td>
</tr>
<tr>
<td>Lung &amp; bronchus</td>
<td>Lung &amp; bronchus</td>
</tr>
<tr>
<td>110,110 (14%)</td>
<td>118,080 (14%)</td>
</tr>
<tr>
<td>Colon &amp; rectum</td>
<td>Colon &amp; rectum</td>
</tr>
<tr>
<td>69,140 (9%)</td>
<td>73,680 (9%)</td>
</tr>
<tr>
<td>Uterine corpus</td>
<td>Urinary bladder</td>
</tr>
<tr>
<td>49,560 (6%)</td>
<td>54,610 (6%)</td>
</tr>
<tr>
<td>Thyroid</td>
<td>Melanoma of the skin</td>
</tr>
<tr>
<td>45,310 (6%)</td>
<td>45,060 (5%)</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>Kidney &amp; renal pelvis</td>
</tr>
<tr>
<td>31,630 (4%)</td>
<td>40,430 (5%)</td>
</tr>
<tr>
<td>Melanoma of the skin</td>
<td>Non-Hodgkin lymphoma</td>
</tr>
<tr>
<td>31,630 (4%)</td>
<td>37,600 (4%)</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>Oral cavity &amp; pharynx</td>
</tr>
<tr>
<td>24,720 (3%)</td>
<td>29,620 (3%)</td>
</tr>
<tr>
<td>Pancreas</td>
<td>Leukemia</td>
</tr>
<tr>
<td>22,480 (3%)</td>
<td>27,880 (3%)</td>
</tr>
<tr>
<td>Ovary</td>
<td>Pancreas</td>
</tr>
<tr>
<td>22,240 (3%)</td>
<td>22,740 (3%)</td>
</tr>
<tr>
<td><strong>All Sites</strong></td>
<td>All Sites</td>
</tr>
<tr>
<td>805,500 (100%)</td>
<td>854,790 (100%)</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td><strong>Male</strong></td>
</tr>
<tr>
<td>Lung &amp; bronchus</td>
<td>Lung &amp; bronchus</td>
</tr>
<tr>
<td>87,260 (28%)</td>
<td>87,260 (28%)</td>
</tr>
<tr>
<td>Breast</td>
<td>Breast</td>
</tr>
<tr>
<td>39,720 (10%)</td>
<td>39,620 (14%)</td>
</tr>
<tr>
<td>Colon &amp; rectum</td>
<td>Colon &amp; rectum</td>
</tr>
<tr>
<td>26,300 (9%)</td>
<td>24,530 (9%)</td>
</tr>
<tr>
<td>Pancreas</td>
<td>Pancreas</td>
</tr>
<tr>
<td>19,480 (6%)</td>
<td>18,980 (7%)</td>
</tr>
<tr>
<td>Ovary</td>
<td>Ovary</td>
</tr>
<tr>
<td>14,890 (5%)</td>
<td>14,030 (5%)</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic bile duct</td>
<td>Leukemia</td>
</tr>
<tr>
<td>12,220 (4%)</td>
<td>10,060 (4%)</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>Non-Hodgkin lymphoma</td>
</tr>
<tr>
<td>10,590 (3%)</td>
<td>8,430 (3%)</td>
</tr>
<tr>
<td>Uterine corpus</td>
<td>Uterine corpus</td>
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<tr>
<td>10,820 (4%)</td>
<td>8,190 (3%)</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic bile duct</td>
<td>Liver &amp; intrahepatic bile duct</td>
</tr>
<tr>
<td>6,780 (2%)</td>
<td>6,780 (2%)</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>Non-Hodgkin lymphoma</td>
</tr>
<tr>
<td>8,780 (3%)</td>
<td>8,780 (3%)</td>
</tr>
<tr>
<td>Brain &amp; other nervous system</td>
<td>Brain &amp; other nervous system</td>
</tr>
<tr>
<td>6,150 (2%)</td>
<td>6,150 (2%)</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>Kidney &amp; renal pelvis</td>
</tr>
<tr>
<td>306,920 (100%)</td>
<td>306,920 (100%)</td>
</tr>
</tbody>
</table>

*Excludes basal and squamous cell skin cancers and in situ carcinoma except urinary bladder. Percentages may not total 100% due to rounding.
Lung Cancer

- Symptoms include a persistent cough, blood-streaked sputum, chest pain, and recurrent attacks of pneumonia or bronchitis.
- Treatment depends on stage and includes surgery, chemotherapy, and radiation.
  - If the cancer is localized, surgery is the treatment of choice.
- Smoking, including secondhand smoke, is a primary risk factor.
Breast Cancer

• Detection:
  – The earliest signs can be detected with mammograms, even before lumps are felt.
  – Regular self-examinations are key.
  – Symptoms include lumps, thickening, dimpling, skin irritation, distortion, nipple discharge, tenderness, etc.

• Treatments range from mastectomy to various combinations of radiation and chemotherapy.
  – Selective estrogen-receptor modulators (SERMs)

• Risk increases with age, includes family history of breast cancer, periods that began early and ended late in life, never having had children, and sudden weight gain.

• Regular exercise can help prevent breast cancer.
Discussion Questions

• What are possible reasons for the increase in younger women who are diagnosed with breast cancer?

• Should genetic testing for breast cancer be widespread? What are the implications for those who do not have access to medical care? Provide an argument that supports why insurance companies should cover screening and genetic testing for BRCA-1 and BRCA-2.

• Should it be mandatory for primary care physicians to refer those with a family history of breast cancer for genetic testing? Why or why not?

• Angelina Jolie is credited with opening the conversation on genetic testing for the BRCA gene. Why do you think it took a celebrity to bring this conversation to the forefront?
Colon and Rectal Cancer

- Third most common cancer in men and women
- Risk factors include older age, obesity, family history, and colitis.
- Warning signals include blood in the stool and rectal bleeding.
- Screening tests include colonoscopy and barium enemas.
- Treatment consists of radiation or surgery.
- Regular exercise, a high fruit- and plant-based diet, healthy weight, and moderate alcohol intake appear to be protective.
Skin Cancer

• About 3.5 million people were diagnosed with skin cancer in 2013.
• Highly curable: basal or squamous
• More lethal: malignant melanoma
• Ninety percent of skin cancers are treated with surgery. Radiation, electrodesiccation, and cryosurgery are also used.
• ABCD rule about melanoma
  – Asymmetry
  – Border irregularity
  – Color
  – Diameter
Types of Skin Cancers

(a) Malignant melanoma

(b) Basal cell carcinoma

(c) Squamous cell carcinoma
Risk Factors for Skin Cancer

- Having fair skin; blonde, red, or light brown hair; blue, green, or grey eyes
- Always burning before tanning, or burning or peeling easily
- Using no or low sun protection factor sunscreen or expired sunscreen
- Previous skin cancer or family history
- Severe sunburns during childhood
Discussion Questions

- What evidence does the video provide that tanning can be addictive?
- What diseases are tanorexics at risk for?
- Do you feel tanning salons have a responsibility to turn tanorexics away due to risks related to skin cancer? Why or why not? Cite information from the video in your response.
- What would you tell your friends about the risks for those who frequently tan? What advice would you give to your friends to protect themselves against sun damage?
Prostate Cancer

• Most frequently diagnosed cancer in American males today, excluding skin cancer, and is the second leading cause of cancer deaths in men after lung cancer.

• Symptoms include weak or interrupted urine flow; difficulty starting or stopping urination; urge to urinate frequently; blood in urine or pain in low back, pelvis, or thighs. Many men do not have symptoms in early stages.

• Risk factors include age, race, and family history.

• Eating more fruit and vegetables may help lower risk.
Ovarian Cancer

- Fifth leading cause of death in women
- Most common symptom is enlargement of the abdomen.
  - Other symptoms include fatigue, pain during intercourse, unexplained weight loss, and changes in bowel or bladder habits.
- Risk factors include family history, no children, and use of fertility drugs.
- Prevention: using birth control pills, low-fat diet, having multiple children, and regular exercise
  - Having an annual pelvic exam is also important.
Other Types of Cancer

• Cervical and Endometrial (Uterine) Cancer
  – Regular Pap tests are crucial for early detection
  – Risk: early onset of intercourse; infection with human papillomavirus
  – Warning: abnormal bleeding

• Testicular Cancer
  – Ages 15 to 35 are at the greatest risk.
  – Cause is unknown.
  – Men with undescended testicles appear to be at the greatest risk.
Discussion Questions

• What advice would you give to a friend who is weighing the option of whether or not to get the HPV vaccine?

• What are the pros and cons one needs to consider prior to getting the vaccine?

• What are the recommendations for who should get the vaccine?
Pancreatic Cancer: Deadly and on the Rise

• Most patients die within 1 year of diagnosis, and only 6 percent survive 5 years.
• Tobacco use appears to be a key risk factor, along with obesity, consumption of high-levels of red meat, and a high-fat diet.
• Few early symptoms, and no reliable test in its early stages.
• By the time it is diagnosed, it is too far advanced to treat.
Facing Cancer

• The earlier the cancer is diagnosed, the better prospect there is for survival.
  – Practice self-exam and checkups
  – Several high-tech tools have been developed to help detect cancer
    • Magnetic resonance Imaging (MRI)
    • Computerized axial tomography scanning (CT scan)
## Screening Guidelines for the Early Detection of Cancer in Average-Risk Asymptomatic People

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Screening Procedure</th>
<th>Age and Frequency of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>Mammograms</td>
<td>The National Cancer Institute recommends that women in their forties and older have mammograms every 1 to 2 years. Women who are at higher-than-average risk of breast cancer should talk with their health care provider about whether to have mammograms before age 40 and how often to have them.</td>
</tr>
<tr>
<td>Cervix</td>
<td>Pap test (Pap smear)</td>
<td>Women should begin having Pap tests 3 years after they begin having sexual intercourse or when they reach age 21 (whichever comes first). Most women should have a Pap test at least once every 3 years.</td>
</tr>
<tr>
<td>Colon and rectum</td>
<td><strong>Fecal occult blood test:</strong> Sometimes cancer or polyps bleed. This test can detect tiny amounts of blood in the stool. <strong>Sigmoidoscopy:</strong> Checks the rectum and lower part of the colon for polyps. <strong>Colonoscopy:</strong> Checks the rectum and entire colon for polyps and cancer.</td>
<td>People aged 50 and older should be screened. People who have a higher-than-average risk of cancer of the colon or rectum should talk with their doctor about whether to have screening tests before age 50 and how often to have them.</td>
</tr>
<tr>
<td>Prostate</td>
<td>Prostate-specific antigen (PSA) test</td>
<td>Some groups encourage yearly screening for men over age 50, and some advise men who are at a higher risk for prostate cancer to begin screening at age 40 or 45. Others caution against routine screening. Currently, Medicare provides coverage for an annual PSA test for all men age 50 and older.</td>
</tr>
</tbody>
</table>

**Sources:** National Cancer Institute, National Institutes of Health, “What You Need to Know About Cancer Screening,” www.cancer.gov; National Cancer Institute, “Fact Sheet, Prostate-Specific Antigen (PSA) Test,” www.cancer.gov
Cancer Treatments

• Surgery to remove tumor
• Chemotherapy
• Radiotherapy
• Researching genes and cell mutations
• Immunotherapy
• Cancer-fighting vaccines
• Stem cell research
Study Guide - Quiz

- Lifestyle affects cancer?
- Factors for heart disease
- Inflammation related to heart disease?
- Heart disease – where you carry your fat
- Prostate cancer – family history
Study Guide - Final

• Ways to help prevent cardiovascular disease
• Metabolic syndrome – definition
• Hypertension – which population has the highest risk
• What increases risk of developing cancer
• Prostate cancer risk