# AACVPR Blueprint

## Domain (Duties and Tasks)

<table>
<thead>
<tr>
<th>1. Patient Assessment</th>
<th>% of exam</th>
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<tbody>
<tr>
<td>1.1 Explain cardiovascular system anatomy and physiology</td>
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<tr>
<td>1.2 Recognize pathophysiology of cardiovascular diseases (e.g., atherosclerosis, valvular heart disease, chronic heart failure)</td>
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<tr>
<td>1.3 Identify risk factors contributing to atherosclerotic heart disease</td>
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<tr>
<td>1.4 Recognize cardiac dysrhythmias and potential implications during physical activity</td>
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<tr>
<td>1.5 Identify cardiovascular interventions and device therapies (e.g., bypass surgery, valve replacement/repair, pacemakers/ICDs, LVADs)</td>
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<tr>
<td>1.6 Review results of cardiovascular assessments, diagnostic tests, and procedures (e.g., 12-lead ECG, heart catheterization, echocardiogram, stress tests)</td>
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<tr>
<td>1.7 Recognize signs and symptoms associated with cardiovascular diseases</td>
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<tr>
<td>1.8 Recognize pharmacologic management plans and potential side effects</td>
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<tr>
<td>1.9 Identify comorbidities that influence function or treatment strategies</td>
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<tr>
<td>1.10 Identify potential psychosocial factors associated with CVD</td>
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<tr>
<td>1.11 Conduct an assessment of functional capacity</td>
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<td>1.12 Conduct pain assessment</td>
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<tr>
<td>1.13 Conduct psychosocial assessment</td>
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<tr>
<td>1.14 Conduct patient learning assessment (e.g., preferred learning style, literacy level, and barriers to learning)</td>
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<tr>
<td>1.15 Conduct nutrition assessment</td>
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<tr>
<td>1.16 Stratify patients for risk of adverse events and disease progression using the AACVPR criteria</td>
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<tr>
<td>1.17 Recognize patient cultural barriers and/or spirituality needs</td>
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<tr>
<td>1.18 Collaborate with patient and family to establish goals</td>
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<tr>
<td>1.19 Share decision-making and management with patient, family, providers and other staff</td>
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<tr>
<td>1.20 Develop evidence-based individualized treatment plan</td>
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## Nutrition Management

<table>
<thead>
<tr>
<th>2. Nutrition Management</th>
<th>% of exam</th>
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<tbody>
<tr>
<td>2.1 Recognize role and impact of diet on CVD progression and risk factor management</td>
<td></td>
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<tr>
<td>2.2 Assess dietary habits that influence disease development and progression</td>
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<tr>
<td>2.3 Identify evidence-based nutrition recommendations for CVD</td>
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<tr>
<td>2.4 Identify evidence-based nutrition recommendations for dyslipidemia</td>
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<tr>
<td>2.5 Identify evidence-based nutrition recommendations for obesity</td>
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<tr>
<td>2.6 Identify evidence-based nutrition recommendations for hypertension</td>
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<tr>
<td>2.7 Identify evidence-based nutrition recommendations for diabetes</td>
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<tr>
<td>2.8 Identify evidence-based nutrition recommendations for heart failure</td>
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<tr>
<td>2.9 Recognize effective behavior change strategies that impact dietary modifications</td>
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<tr>
<td>2.10 Recognize when to refer a patient or consult with other professional(s) for nutritional management</td>
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### AACVPR Blueprint

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<table>
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<tbody>
<tr>
<td><strong>3. Weight Management</strong></td>
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<tr>
<td>3.1 Assess body weight status (overweight and obesity), body fat percentage, waist measurement, and body fat distribution</td>
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<tr>
<td>3.2 Recognize the physiologic and pathologic effects of overweight/obesity and that of low body weight</td>
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<tr>
<td>3.3 Identify methods that affect energy balance (caloric intake vs. caloric expenditure)</td>
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<tr>
<td>3.4 Apply weight management strategies through the balance of caloric intake and caloric expenditure (e.g., diet strategies, physical activity strategies)</td>
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<tr>
<td>3.5 Incorporate evidence-based guidelines and recommendations for healthy body weight</td>
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<tr>
<td>3.6 Employ weight loss interventions that promote gradual, sustainable weight loss (5%-10%) over 3-6 months</td>
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<tr>
<td>3.7 Recognize effective behavior change strategies that impact weight management</td>
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<tr>
<td>3.8 Recognize when to refer a patient or consult with other professional(s) for weight management</td>
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<tr>
<td><strong>4. Blood Pressure Management</strong></td>
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<tr>
<td>4.1 Recognize the etiology and pathophysiology of hypertension as a risk factor for CVD</td>
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<tr>
<td>4.2 Recognize the role of the kidney in blood pressure control</td>
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<tr>
<td>4.3 Explain the physiology of BP (at rest and during exercise)</td>
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<tr>
<td>4.4 Classify blood pressure according to current guidelines, including secondary prevention targets</td>
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<tr>
<td>4.5 Identify symptomatic hypotension</td>
<td></td>
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<tr>
<td>4.6 Manage patient with hypotension</td>
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<tr>
<td>4.7 Identify management strategies for patients with hypertension</td>
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<tr>
<td>4.8 Measure BP using an appropriately sized arm cuff with an aneroid sphygmomanometer or alternative devices</td>
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<tr>
<td>4.9 Perform accurate BP measurements at rest and during exercise</td>
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<tr>
<td>4.10 Educate patients on home BP monitoring and management</td>
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<tr>
<td>4.11 Reinforce to patients the importance of BP medication adherence</td>
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<tr>
<td>4.12 Recognize effective behavior change strategies that impact BP management</td>
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<tr>
<td>4.13 Recognize when to refer a patient or consult with other professional(s) for BP management</td>
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<tr>
<td>4.14 Address psychosocial issues that affect BP and BP management</td>
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<tr>
<td>4.15 Identify antihypertensive medications, common side effects, and possible effects on the acute responses to exercise</td>
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<tr>
<td>4.16 Educate patients on the role of sodium and alcohol restrictions in BP control</td>
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<tr>
<td>4.17 Emphasize the importance of a multifactorial approach to BP management</td>
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<tr>
<td><strong>5. Blood Lipid Management</strong></td>
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</table>

**5. Blood Lipid Management**

- Recognize the etiology and pathophysiology of hypertension as a risk factor for CVD
- Recognize the role of the kidney in blood pressure control
- Explain the physiology of BP (at rest and during exercise)
- Classify blood pressure according to current guidelines, including secondary prevention targets
- Identify symptomatic hypotension
- Manage patient with hypotension
- Identify management strategies for patients with hypertension
- Measure BP using an appropriately sized arm cuff with an aneroid sphygmomanometer or alternative devices
- Perform accurate BP measurements at rest and during exercise
- Educate patients on home BP monitoring and management
- Reinforce to patients the importance of BP medication adherence
- Recognize effective behavior change strategies that impact BP management
- Recognize when to refer a patient or consult with other professional(s) for BP management
- Address psychosocial issues that affect BP and BP management
- Identify antihypertensive medications, common side effects, and possible effects on the acute responses to exercise
- Educate patients on the role of sodium and alcohol restrictions in BP control
- Emphasize the importance of a multifactorial approach to BP management
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>5.1 Explain the components of a blood lipid profile (i.e., LDL-C, HDL-C, VLDL-C,</td>
</tr>
<tr>
<td>TG, non-HDL-C)</td>
</tr>
<tr>
<td>5.2 Identify optimal blood lipid values based on evidence-based guidelines</td>
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<tr>
<td>5.3 Reinforce regular blood lipid assessments</td>
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<tr>
<td>5.4 Describe the physiologic role of lipids and inflammation in the atherosclerotic disease process</td>
</tr>
<tr>
<td>5.5 Reinforce the effect of various diets on blood lipids (e.g., TLC diet,</td>
</tr>
<tr>
<td>Mediterranean diet, DASH diet)</td>
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<tr>
<td>5.6 Identify lipid lowering medications and common side effects</td>
</tr>
<tr>
<td>5.7 Describe the effects that dietary fats and simple carbohydrates have on</td>
</tr>
<tr>
<td>blood lipid levels</td>
</tr>
<tr>
<td>5.8 Educate patients on the use of food labels related to the types and amounts</td>
</tr>
<tr>
<td>of dietary fats</td>
</tr>
<tr>
<td>5.9 Explain the influence of type II diabetes on blood lipids</td>
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<tr>
<td>5.10 Describe the importance and efficacy of pharmacological approaches to</td>
</tr>
<tr>
<td>control blood lipids</td>
</tr>
<tr>
<td>5.11 Describe the importance and efficacy of non-pharmacological approaches</td>
</tr>
<tr>
<td>to control blood lipids (e.g., exercise, weight management, smoking cessation,</td>
</tr>
<tr>
<td>alcohol consumption)</td>
</tr>
<tr>
<td>5.12 Reinforce to patients the importance of lipid lowering medication</td>
</tr>
<tr>
<td>adherence</td>
</tr>
<tr>
<td>5.13 Recognize effective behavior change strategies that impact blood lipid</td>
</tr>
<tr>
<td>management</td>
</tr>
<tr>
<td>5.14 Recognize when to refer a patient or consult with other professional(s)</td>
</tr>
<tr>
<td>for blood lipid management</td>
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<tr>
<td><strong>6. Diabetes Management</strong></td>
</tr>
<tr>
<td>6.1 Recognize the etiology and pathophysiology of type I and type II Diabetes</td>
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<tr>
<td>Mellitus (DM)</td>
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<tr>
<td>6.2 Identify recommended fasting and non-fasting blood glucose values which</td>
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<tr>
<td>define hypoglycemia and hyperglycemia</td>
</tr>
<tr>
<td>6.3 Recognize the clinical importance and recommended target value for</td>
</tr>
<tr>
<td>glycosolated hemoglobin (HbA1c) in diabetic patients</td>
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<tr>
<td>6.4 Identify signs/symptoms of hypoglycemia and hyperglycemia</td>
</tr>
<tr>
<td>6.5 Explain appropriate responses to hypoglycemic and hyperglycemic events</td>
</tr>
<tr>
<td>6.6 Identify glucose lowering medications and common side effects</td>
</tr>
<tr>
<td>6.7 Reiterate the clinical importance of monitoring blood glucose values</td>
</tr>
<tr>
<td>before and after exercise training sessions</td>
</tr>
<tr>
<td>6.8 Identify contraindications for beginning exercise based on blood glucose</td>
</tr>
<tr>
<td>values</td>
</tr>
<tr>
<td>6.9 Identify the components of the metabolic syndrome</td>
</tr>
<tr>
<td>6.10 Modify exercise plan to accommodate for complications of DM (e.g.,</td>
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<tr>
<td>peripheral neuropathy, PAD, CAD/CVA, diabetic retinopathy)</td>
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<tr>
<td>6.11 Emphasize proper foot care for persons with DM</td>
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<td>AACVPR Blueprint</td>
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<tr>
<td>6.12 Describe the importance and efficacy of non-pharmacological approaches to control DM (e.g., exercise, weight management, reduced alcohol consumption)</td>
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<tr>
<td>6.13 Educate patients on the proper use of glucometers</td>
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<tr>
<td>6.14 Reinforce to patients the importance of DM medication adherence</td>
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<tr>
<td>6.15 Recognize effective behavior change strategies that impact DM management</td>
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<tr>
<td>6.16 Recognize when to refer a patient or consult with other professional(s) for DM management</td>
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<tr>
<td>6.17 Address psychosocial issues that affect DM management</td>
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<tr>
<td><strong>7. Tobacco Cessation</strong></td>
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<tr>
<td>7.1 Incorporate current guidelines for treating tobacco use into patient plan of care</td>
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<tr>
<td>7.2 Identify the biochemical and physiologic consequences of tobacco use</td>
</tr>
<tr>
<td>7.3 Identify the physiologic and psychological aspects of nicotine addiction</td>
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<tr>
<td>7.4 Identify the risk for the development of CVD from secondhand smoke</td>
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<tr>
<td>7.5 Identify the risks for relapse and strategies for preventing relapse</td>
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<tr>
<td>7.6 Address psychosocial issues that affect tobacco cessation</td>
</tr>
<tr>
<td>7.7 Recognize effective behavior change strategies that impact tobacco cessation</td>
</tr>
<tr>
<td>7.8 Recognize when to refer a patient to or consult with other professional(s) for tobacco cessation</td>
</tr>
<tr>
<td>7.9 Reinforce to patients the importance of tobacco pharmacologic therapy and medication adherence</td>
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<tr>
<td>7.10 Provide patients with national and local resources for tobacco cessation</td>
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<tr>
<td>7.11 Identify tobacco cessation medications and common side effects</td>
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<tr>
<td><strong>8. Psychosocial Management</strong></td>
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<tr>
<td>8.1 Recognize the influence of psychosocial risk factors on the pathophysiology of CVD</td>
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<tr>
<td>8.2 Recognize symptoms associated with psychosocial disorders</td>
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<tr>
<td>8.3 Recognize the influence of psychosocial risk factors on rehabilitation and compliance</td>
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<tr>
<td>8.4 Identify the important considerations in selecting tool(s) to screen for psychosocial risk factors</td>
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<tr>
<td>8.5 Incorporate psychosocial outcome measures to guide treatment</td>
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<tr>
<td>8.6 Recognize the association of psychosocial factors (i.e., anxiety, depression, anger/hostility, social isolation and substance abuse) with recurrent CVD events and negative outcomes</td>
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<tr>
<td>8.7 Implement AHA recommendation to screen for depression</td>
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<tr>
<td>8.8 Instruct patients on extrinsic chronic and acute psychosocial stressors (e.g., socioeconomic, work, marital, caregiving)</td>
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<tr>
<td>8.9 Explain to patients the interaction between psychosocial risk factors and other health issues (e.g., GI, chronic pain, impaired immune response, sleep disturbances)</td>
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<tr>
<td>8.10 Incorporate relaxation techniques, including deep breathing and progressive muscle relaxation</td>
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### AACVPR Blueprint

<table>
<thead>
<tr>
<th></th>
<th>8.11 Reinforce to patients the importance of adhering to medication(s) used to manage psychosocial issues</th>
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<tbody>
<tr>
<td></td>
<td>8.12 Identify medications used for psychosocial issues and common side effects</td>
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<td></td>
<td>8.13 Recognize effective behavior change strategies that impact psychosocial issues</td>
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<td></td>
<td>8.14 Recognize when to refer a patient or consult with other professional(s) for psychosocial management</td>
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<tr>
<td>9. Physical Activity Counseling</td>
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<tr>
<td></td>
<td>9.1 Differentiate between physical activity and exercise</td>
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<tr>
<td></td>
<td>9.2 Identify methods to assess physical activity (subjective and objective)</td>
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<td></td>
<td>9.3 Recognize pros and cons of different types of physical activity assessment methodologies</td>
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<td>9.4 Interpret physical activity assessment results</td>
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<td>9.5 Recognize the lack of regular physical activity and sedentary behavior as risk factors for CVD morbidity and mortality</td>
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<tr>
<td></td>
<td>9.6 Counsel patients regarding current evidence-based recommendations for regular physical activity (intensity, frequency, and accumulate daily duration) for adults and older adults</td>
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<td>9.7 Emphasize the importance of physical activity progression for previously sedentary or irregularly active adults</td>
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<td>9.8 Consider modification of physical activity recommendations based on preexisting conditions (e.g., musculoskeletal and neuromuscular)</td>
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<td>9.9 Identify physical activities that may increase the risk for an adverse event</td>
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<td>9.10 Identify environmental conditions that increase the risk for an adverse event while performing physical activity</td>
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<td>9.11 Recognize barriers to increasing physical activity</td>
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<td>9.12 Counsel patients on metabolic requirements for common activities (e.g., recreational, occupational, sexual)</td>
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<td></td>
<td>9.13 Differentiate between the physiologic demands of upper and lower body physical activities</td>
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<td>9.14 Recognize effective behavior change strategies that impact physical activity</td>
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<td>9.15 Recognize when to refer a patient or consult with other professional(s) to assist with physical activity limitations (e.g., physical therapy, occupational therapy, orthopedic)</td>
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<td>9.16 Incorporate the use of goal setting to support physical activity behavior change</td>
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<td>9.17 Advise patients on the benefits and usage of activity monitoring devices for increasing physical activity (e.g., pedometers, heart rate monitors)</td>
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<td>9.18 Address interrelationship between psychosocial health and physical activity</td>
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<td>10. Exercise Training</td>
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<tr>
<td></td>
<td>10.1 Identify absolute and relative contraindications for exercise</td>
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<td>10.2 Identify absolute and relative indications for stopping exercise</td>
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<td>10.3 Recognize serious dysrhythmias (e.g., ventricular couplets, ventricular fibrillation, ventricular tachycardia, bundle branch block, atrial fibrillation)</td>
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<td>10.4 Recognize ECG changes and symptoms for myocardial ischemia and infarction</td>
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<tr>
<td>10.5 Specify the components of health-related physical fitness</td>
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<tr>
<td>10.6 Consider the importance of various cardiovascular physiologic measures (e.g., metabolic equivalents METs, rate pressure product RPP, oxygen uptake VO2, ejection fraction EF)</td>
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<tr>
<td>10.7 Recognize normal acute physiologic responses to aerobic exercise</td>
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<tr>
<td>10.8 Respond to adverse events during exercise</td>
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<tr>
<td>10.9 Recognize the effect medications have on exercise responses</td>
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<tr>
<td>10.10 Recognize normal chronic adaptations to aerobic exercise training</td>
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<tr>
<td>10.11 Recommend individualized, safe and effective modes, intensity, frequency, duration, and progression of the aerobic exercise prescription for cardiac patients</td>
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<tr>
<td>10.12 Consider modification of exercise prescription to accommodate existing comorbidities</td>
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<tr>
<td>10.13 Design an aerobic exercise training session (i.e., warm-up, exercise, cool-down and stretching)</td>
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<tr>
<td>10.14 Coach proper techniques for improving flexibility, balance, and strength</td>
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<tr>
<td>10.15 Prescribe individualized resistance training program (e.g., repetitions, sets, frequency, correct technique, and progression)</td>
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<tr>
<td>10.16 Instruct patients on proper skin preparation and electrode placement for ECG telemetry monitoring</td>
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<tr>
<td>10.17 Maintain and calibrate exercise equipment</td>
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<tr>
<td>10.18 Recognize effective behavior change strategies that impact the exercise training</td>
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