

acute coronary syndrome rupture of an atheromatous plaque in a diseased coronary artery, which rapidly forms an obstructive thrombus

afterload the amount of resistance to ejection of blood from the ventricle

apical impulse (also called point of maximum impulse) impulse normally palpated at the fifth intercostal space, left midclavicular line; caused by contraction of the left ventricle

atrioventricular (AV) node secondary pacemaker of heart, located in right atrial wall near the tricuspid valve

baroreceptors nerve fibers located in the aortic arch & carotid arteries, responsible for reflex control of BP

cardiac cath invasive procedure, measures cardiac chamber pressures & patency of coronary arteries

cardiac conduction system specialized heart cells strategically located throughout the heart that are responsible for methodically generating and coordinating the transmission of electrical impulses to the myocardial cells

cardiac output amount of blood pumped by each ventricle in liters per minute

cardiac stress test used to evaluate the functioning of the heart during a period of increased oxygen demand

contractility ability of the cardiac muscle to shorten in response to an electrical impulse

depolarization electrical activation of a cell caused by the influx of Na^+ into the cell while K^+ exits the cell

diastole period of ventricular relaxation resulting in ventricular filling

ejection fraction percentage of the end-diastolic blood volume ejected from the ventricle with each heartbeat

hemodynamic monitoring use of pressure monitoring devices to directly measure cardiovascular function

hypertension blood pressure that is persistently greater than 140/90 mm Hg

hypotension a decrease in blood pressure to less than 100/60 mm Hg that compromises systemic perfusion

murmurs sounds created by abnormal, turbulent flow of blood in the heart

myocardial ischemia condition in which heart muscle cells receive less oxygen than needed

myocardium muscle layer of the heart responsible for the pumping action of the heart

normal heart sounds produced when valves close; S_1 (atrioventricular valves) and S_2 (semilunar valves)

opening snaps abnormal diastolic sound generated during opening of a rigid AV valve leaflet

preload degree of stretch of the cardiac muscle fibers at the end of diastole

pulmonary vascular resistance resistance to right ventricular ejection of blood

radioisotopes unstable atoms, emit small amts of energy as gamma rays; for cardiac nuclear medicine studies

repolarization return of cell to resting state, caused by reentry of K^+ into the cell while sodium exits the cell

S_1 the first heart sound produced by closure of the atrioventricular (mitral and tricuspid) valves

S_2 the second heart sound produced by closure of the semilunar (aortic and pulmonic) valves

S_3 an abnormal heart sound detected early in diastole as resistance is met to blood entering either ventricle; most often due to volume overload associated with heart failure

S_4 an abnormal heart sound detected late in diastole as resistance is met to blood entering either ventricle during atrial contraction; most often caused by hypertrophy of the ventricle

sinoatrial (SA) node primary pacemaker of the heart, located in the right atrium

stroke volume amount of blood ejected from the ventricle per heartbeat

summation gallop the abnormal sound created during tachycardia by the presence of an S_3 and S_4

systemic vascular resistance resistance to left ventricle ejection

systole ventricular contraction resulting in ejection of blood from ventricles into pulmonary artery & aorta

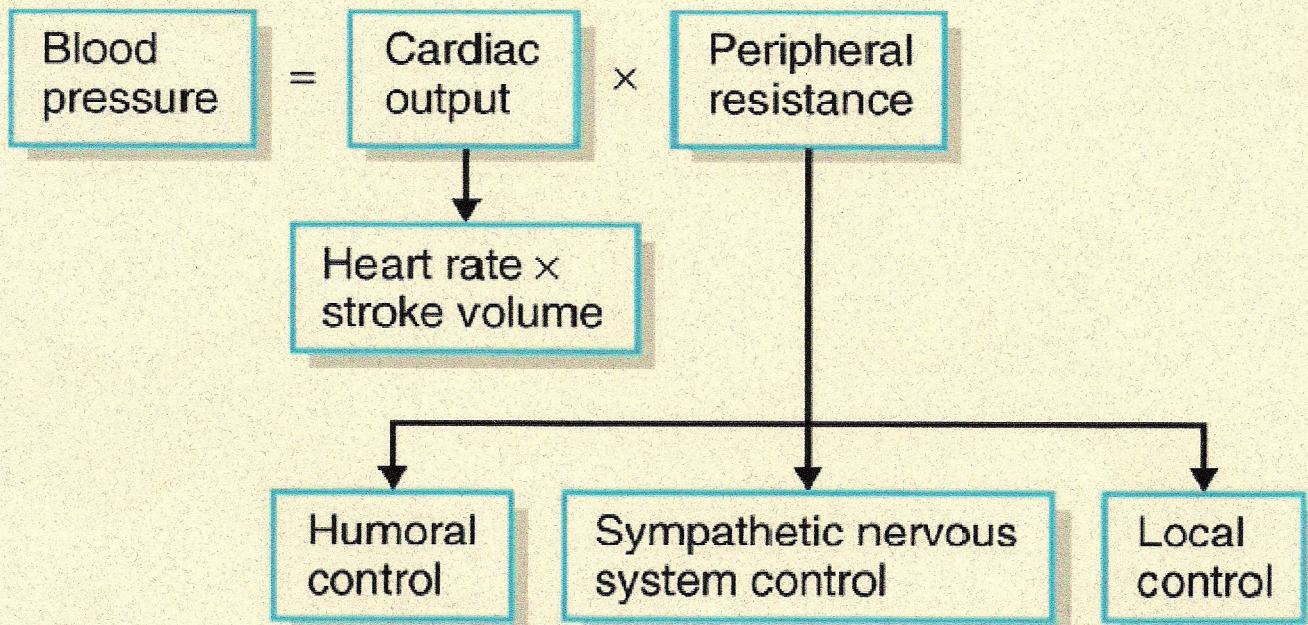
systolic click abnormal, created by opening of a calcified aortic or pulmonic valve during ventricular contrxn

telemetry the process of continuous electrocardiographic monitoring by the transmission of radio waves from a battery-operated transmitter worn by the patient

JNC 7 Treatment Guidelines

Hypertension Classification	Systolic Blood Pressure (mm Hg)	Diastolic Blood Pressure (mm Hg)	Lifestyle Changes	Initial Drug Therapy	
				Without Compelling Indications	With Compelling Indications
Normal	<120	and <80	Encourage	No antihypertensive drug indicated	Drug(s) for compelling indications
Prehypertensive	120-139	or 80-89	Yes	No antihypertensive drug indicated	Drug(s) for compelling indications
Stage 1	140-159	or 90-99	Yes	Thiazide-type diuretics for most; may consider ACEIs, ARBs, BBs, CCBs, or combination	Drug(s) for compelling indications; other antihypertensive drugs (diuretics, ACEIs, ARBs, BBs, CCBs) as needed
Stage 2	≥160	or ≥100	Yes	Thiazide-type diuretics for most; may consider ACEIs, ARBs, BBs, CCBs, or combination	Drug(s) for compelling indications; other antihypertensive drugs (diuretics, ACEIs, ARBs, BBs, CCBs) as needed

Compelling indications: heart failure, postmyocardial infarction, high coronary disease risk, diabetes, chronic kidney disease, and recurrent stroke prevention.
 JNC 7 = The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; ACEIs = angiotensin-converting enzyme inhibitors; ARBs = angiotensin receptor blockers; BBs = beta-blockers; CCBs = calcium channel blockers.
 Source: National Heart, Lung, and Blood Institute. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Washington, DC: US Department of Health and Human Services, 2003.



Components of Hypertension

Table 26-3 Common Skin Findings Associated With Cardiovascular Disease

Findings	Associated Conditions
<p>Pallor (decreased color of the skin, often noted around the fingernails, lips, and oral mucosa, or in patients with dark skin, the palms of the hands and soles of the feet)</p>	<p>Caused by lack of oxyhemoglobin, it is a result of anemia or decreased arterial perfusion.</p>
<p>Peripheral cyanosis (a bluish tinge, most often of the nails and skin of the nose, lips, earlobes, and extremities)</p>	<p>It suggests decreased blood flow to a particular area, which allows more time for the hemoglobin molecule to become desaturated. This may occur normally in peripheral vasoconstriction associated with a cold environment, in patients with anxiety, or in disease states such as heart failure.</p>
<p>Central cyanosis (a bluish tinge observed in the tongue and buccal mucosa)</p>	<p>It denotes serious cardiac disorders (pulmonary edema and congenital heart disease) in which venous blood passes through the pulmonary circulation without being oxygenated.</p>
<p>Xanthelasma (yellowish, slightly raised plaques in the skin observed along the nasal portion of one or both eyelids)</p>	<p>It may indicate elevated cholesterol levels (hypercholesterolemia)</p>
<p>Echymosis (bruise, a purplish-blue color fading to green, yellow, or brown over time)</p>	<p>Patients who are receiving platelet-inhibiting medications or anticoagulant therapy should be carefully observed for unexplained echymosis. In these patients, excessive bruising indicates reduced platelet function (platelet-inhibiting medications) or prolonged clotting times (prothrombin, international normalized ratio, or partial thromboplastin time) caused by an anticoagulant dosage that is too high.</p>
<p>Thinning of skin surrounding a pacemaker or implantable cardioverter-defibrillator (ICD)</p>	<p>This could indicate erosion of the device through the skin.</p>
<p>Cool/cold and moist skin</p>	<p>In cardiogenic shock, sympathetic nervous system stimulation causes vasoconstriction, and the skin becomes cold and clammy. During acute coronary syndrome, diaphoresis is common.</p>

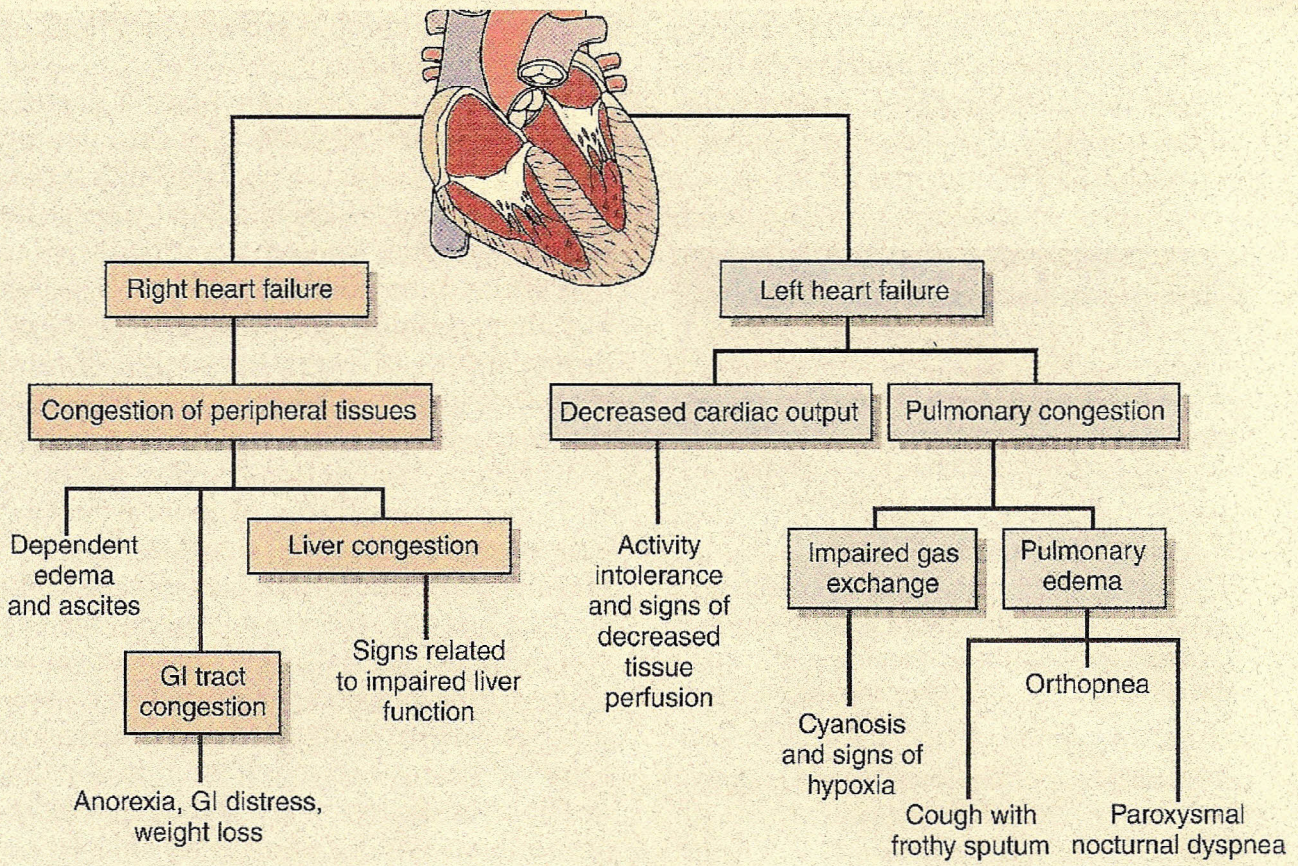


FIGURE 19-4 Manifestations of left- and right-sided heart failure.

