

- Health care-associated pneumonia, 703t, 707
- Heart, 523-578
- aging effects on, 525-526, 526t
 - amyloidosis of, 260b-261b
 - blood supply to, 525
 - conduction system of, 524-525
 - morphology of, 529b-530b, 535b-536b
 - structure and specializations of, 523-525, 572b
 - tumors of, 575-577
 - cardiac effects of noncardiac, 576-577, 576t
 - primary cardiac, 575-576, 575f
- Heart attack. *See* Myocardial infarction (MI).
- Heart disease
- carcinoid, 562
 - cardiomyopathies as, 564-573
 - congenital, 531-538
 - cyanotic, 535
 - with left-to-right shunts, 533-535, 534f
 - atrial septal defect as, 534-535, 534f
 - patent ductus arteriosus as, 534f, 535
 - patent foramen ovale as, 534-535
 - ventricular septal defect as, 534f, 535f, 535
 - obstructive, 537-538
 - aortic stenosis and atresia as, 537-538
 - coarctation of the aorta as, 537, 537f
 - pulmonary stenosis or atresia as, 537
 - with right-to-left shunts, 533, 535-537, 536f
 - persistent truncus arteriosus as, 535
 - tetralogy of Fallot as, 535-536, 536f
 - total anomalous pulmonary venous connection as, 535
 - transposition of the great arteries as, 536-537, 536f
 - tricuspid atresia as, 535
- hypertensive, 552-553
- pulmonary (right-sided), 553, 553f, 553t
 - systemic (left-sided), 552-553, 553f
- ischemic, 538-550
- angina pectoris as, 538-540
 - chronic, 550, 550b, 550f
 - epidemiology of, 538-539
 - myocardial infarction as, 540-549
 - clinical features of, 547, 547f
 - consequences and complications of, 547-549, 548f
 - expansion of, 549
 - extension of, 555
 - incidence and risk factors for, 540
 - pathogenesis of, 540-549
 - reperfusion of, 545-547, 546f
 - reversible vs. irreversible, 541f, 544t, 546f
 - right ventricular, 568
 - subendocardial, 543
 - transmural, 540, 543
 - triphenyltetrazolium chloride in, 544-545, 544f
 - pathogenesis of, 539
 - sudden cardiac death due to, 539, 551-552
- myocarditis as, 570-571
- pericardial, 573-575
- due to rheumatologic disorders, 575
 - hemopericardium as, 573
- Heart disease (*Continued*)
- pericardial effusion as, 573
 - pericarditis as, 573-575
 - tumors as, 575-577
 - cardiac effects of noncardiac, 576-577, 576t
 - primary cardiac, 575-576, 575f
 - valvular, 554-563
 - with calcification, 554-556, 555f
 - endocarditis as
 - infective, 559-561
 - nonbacterial thrombotic endocarditis, 561-562
 - noninfected vegetations, 561-562
 - etiologies of acquired, 554, 554t
 - mitral valve prolapse as, 556
 - rheumatic, 557-559
- Heart failure, 526-530, 530b-531b
- left-sided, 529-530
 - right-sided, 530
 - therapy for, 530
- Heart failure cells, 529
- Heart fields, in cardiac development, 531
- Heart valves, 524
- Heat cramps, 427
- Heat exhaustion, 427
- Heat intolerance, in hyperthyroidism, 1084
- Heat stroke, 427
- Heavy-chain disease, 599
- Heberden nodes, 1208-1209
- Hedgehog signaling pathway, 454
- Heinz bodies, 634, 635f
- Helicobacter pylori*, as carcinogen, 329
- HELLP syndrome, 866
- Helper T lymphocytes, in immune system, 190, 198f
- Hemangioblastomas, in von Hippel-Lindau disease, 1317b
- Hemangioma(s), 516, 517f
- capillary, 516
 - cavernous, 516
 - in infants and children, 474, 474f
 - juvenile, 516
 - pyogenic granulomas as, 516
- Hemangiopericytoma, 520
- Hemarthrosis, 122
- Hematocele, 980
- Hematocrit, 629
- adult reference range for, 631t
- Hematogenous spread, 274-275
- Hematologic disorder, and systemic lupus erythematosus, 218t
- Hematologic (transplacental) infections, 460, 460f
- Hematoma, 122
- epidural, 1261, 1261f, 1262f
 - subdural, 1262, 1262f
- Hematopoiesis, spleen and, 623
- Hematopoietic stem cells (HSCs), 579-580
- transplantation of, 236
- Hematopoietic system
- components of, 579
 - radiation effects on, 430-431
- Hematopoietic tissues
- development/maintenance of, 579-581, 580f, 581t
 - morphology of, 581b-582b
- Hematuria
- asymptomatic, 898
 - benign familial, 925
- Hemidesmosome, 11-12
- Hemochromatosis, 650-651, 847-849, 848f, 852b
- morphology of, 848b-849b
- Hemodialysis-associated amyloidosis, 260
- Hemodynamic disorders, 113-135
- edema as, 113-115
 - hemorrhagic disorders, 116-127
 - hyperemia and congestion as, 115-116
- Hemoglobin
- adult reference range for, 631t
 - mean cell, 630, 631t
- Hemoglobin C (HbC), 635
- Hemoglobin concentration, 629
- mean cell, 630, 631t
 - in sickle cell disease, 636
- Hemoglobin H (HbH) disease, 641-642, 642t
- Hemoglobin SC (HbSC) disease, 635
- Hemoglobinuria, paroxysmal
- cold, 644
 - nocturnal, 642-643, 643f
- Hemojuvelin, 848
- Hemolysis
- extravascular, 631
 - in β -thalassemia, 639
 - intravascular, 631
 - in paroxysmal nocturnal hemoglobinuria, 642
- Hemolytic anemias, 631-644
- classification of, 630t, 632
 - due to glucose-6-phosphate dehydrogenase deficiency, 634-635, 634f, 635f
 - due to hereditary spherocytosis, 632-634, 632f, 633f
 - due to paroxysmal nocturnal hemoglobinuria, 642-643, 643f
 - due to red cell trauma, 644, 644f
 - due to sickle cell disease, 635-638, 636f, 637f
 - due to thalassemia syndromes, 638-642, 639f, 642t
 - immuno-, 643-644, 643t
 - microangiopathic, 644, 644f
 - morphology of, 632b, 632f
- Hemolytic-uremic syndrome (HUS), 659-660, 660t, 665b, 942, 943b
- Hemopericardium, 573
- Hemophagocytic lymphohistiocytosis (HLH), 585-586
- Hemophilia A, 662-663, 665
- Hemophilia B, 663, 665
- Hemorrhagic cystitis, 962
- Hemorrhagic disorders, 116-127
- Hemorrhagic (hypovolemic) shock, 122
- Hemorrhoids, 514, 815, 815b-816b
- Hemosiderin, 650
- intracellular accumulation of, 64
- Hemosiderosis, 65
- in hemolytic anemia, 632
- Hemostasis, 116-121
- coagulation cascade in, 118-120, 118f, 119f
 - endothelium in, 121
 - general sequence of events in, 116-117, 117f
 - platelets in, 117-118
 - primary, 116
 - secondary, 116
- Hemostatic plug, 116, 117f
- secondary, 118
- Hemothorax, 722
- Hemp, asthma due to, 688t
- Henoch-Schönlein purpura, 657, 926
- Hepadnaviridae, 832
- Heparin, unfractionated, 124
- Heparin-induced thrombocytopenia (HIT), 124, 659