

- Head and neck infections, 867-871.  
*see also* Pharyngitis.  
 acute bacterial otitis externa, 870  
 acute bacterial otitis media, 870-871  
 acute bacterial sinusitis, 867-868  
 common cold, 867  
 oral cavity infections, 869-870  
 pharyngitis, 868-869
- Head cancer, 613-614, 614f
- Head injuries. *see also* Brain injury, traumatic.  
 epilepsy secondary to, 1055  
 retrograde amnesia and, 994
- Headache, 994-1000  
 assessment of, questions in, 994t  
 brain tumor and, 1065  
 cervicogenic, 1000  
 classification of, 994-999, 994t  
 cluster, 997  
 cranial neuralgias, 994t, 1000  
 daily  
   chronic, 998  
   new persistent, 998  
 definition and epidemiology of, 994  
 differential diagnosis for, 998t  
 evaluation of, 999-1000  
 in giant-cell arteritis, 999  
 in idiopathic intracranial hypertension, 998-999  
 in idiopathic intracranial hypotension, 999  
 muscle-contraction, 997  
 post-traumatic, 999  
 short-lasting unilateral neuralgiform headache with conjunctival tearing, 997-998  
 in sinusitis, 998  
 structural brain lesions in, clinical features suggesting, 999t  
 tension-type, 997
- Health care-associated pneumonia (HCAP), 255
- Hearing impairments, 1006-1009  
 auditory dysfunction, symptoms of, 1006-1007, 1007f  
 auditory system, examination of, 1007-1008  
 prospectus for the future, 1009
- Hearing loss  
 causes of, 1008-1009, 1008t  
 treatment of, 1009
- Heart  
 blood supply of, 16  
 and blood vessels, infections of, 877-883  
   central venous catheter-related bloodstream infections, 883  
   endarteritis, 882-883  
   infective endocarditis, 877-882  
   suppurative phlebitis, 882-883  
 conduction system of, 17  
   blood supply of, 16  
   cells of, 17-18  
 contraction of, 18-21, 18f  
 hemodynamic changes in, 19  
 innervation of, 17  
 muscle physiology of, 18-21, 18f  
 normal structure and function of, 16-21  
 trauma to, 146-147, 146t  
 tumors of, 145, 145t, 146f
- Heart disease, traumatic, 146-147, 146t
- Heart failure, 55-66  
 acute congestive, infective endocarditis and, 881  
 acute kidney injury and, 356-357  
 clinical presentation and diagnosis of, 59  
 congestive, pleural effusion, 248-249  
 definition of, 55-57, 55t  
 diagnostic testing, 59-60, 60f  
 epidemiology, 57  
 hypertrophic cardiomyopathy and, 142  
 infective endocarditis and, 878  
 laboratory evaluation for, 60  
 mechanical circulatory support for, 65  
 myocardial infarction and, 107  
 neurohormonal activation in, 58-59  
 noncardiac surgery in patient with, 156  
 pathogenesis of, 57-59, 58f  
 perioperative, 156  
 in peripartum cardiomyopathy, 157  
 in pregnancy  
   aortic stenosis, 157  
   mitral stenosis, 156  
 with preserved ejection fraction, 57-66  
 prevalence of, 57, 57f  
 prognosis of, 66, 66f  
 risk factors for, 57  
 stage D, 65, 66t  
 treatment of, 60-65  
   acute, 60, 62f  
   with anticoagulation, 64  
   drugs to avoid, 64  
   with hormonal therapy, 64  
   with implantable cardiac defibrillators, 64  
   nonpharmacologic, 61, 62t  
   pharmacologic, 61-64, 63t  
   with resynchronization therapy, 64, 65f  
   tricuspid valve disease and, 84
- Heart murmurs, in infective endocarditis, 878
- Heart rate, 17  
 autonomic regulation of, 116  
 myocardial ischemia and, 91  
 myocardial oxygen consumption and, 20
- Heart sounds  
 abnormal, 31-33, 32t, 33f  
 normal, 31  
 prosthetic, 35
- Heartburn, 396-397
- HeartWare, 65
- Heat shock proteins, 5
- Heat stroke, 835
- Heavy-chain disease, 532
- Heavy metals, chronic interstitial nephritis from, 331
- Helicobacter pylori*  
 iron deficiency anemia, 505  
 MALT lymphoma and, 522-523
- Helicobacter pylori* infection, 404-405  
 diagnostic tests for, 407, 408f  
 dyspepsia and, 373-374  
 gastric cancer and, 404-405, 599  
 gastric ulcer and, 405f  
 gastritis in, 404-405, 407  
 hypergastrinemia in, 414  
 MALT lymphoma and, 405  
 treatment of, 409, 409t  
 in nonulcer dyspepsia, 413
- HELLP syndrome, 177, 347  
 microangiopathic hemolysis and, 509  
 thrombocytopenia in, 553
- Helminthic infections, 951-957, 955t  
 common in travelers and immigrants, 956-957  
 common in United States, 955-956
- Hemarthrosis, in hemophilia, 815
- Hematemesis, 375  
 vs. hemoptysis, 186
- Hematochezia, 375  
 colorectal cancer and, 601-602
- Hematogenous osteomyelitis, 905
- Hematologic disease, chronic kidney disease with, 365-366
- Hematomas  
 intracerebral, 1043  
 intramural, aortic, 162
- Hematopoiesis, 478-480, 478t  
 differentiation pathway, 479-480, 479f  
 erythroid lineage, 480  
 granulocyte and monocyte lineage, 480  
 pluripotent stem cells in, 479-480  
 stem cell plasticity in, 480  
 extramedullary, in primary myelofibrosis, 492  
 hematopoietic tissues, 478  
 prospectus for the future, 488  
 stem cell theory of, 478-479
- Hematopoietic failure syndromes, primary, 480-488, 480t  
 aplastic anemia, 482-483  
 growth factors for, 480-481  
 hematopoietic stem cell transplantation for, 481-482  
 myelodysplastic syndrome, 484-488  
 paroxysmal nocturnal hemoglobinuria, 483-484
- Hematopoietic stem cell (HSC), 478  
 characteristics of, 478  
 plasticity of, 480  
 pluripotent, 479-480  
 transplantation of, 481-482  
 sources for, 482
- Hematopoietic stem cell transplantation, 946-947  
 timing of infection after, 946f
- Hematuria, IgA nephropathy and, 318
- Hemianopia, 1002
- Hemicrania, paroxysmal, 997
- Hemicrania continua, 997
- Hemispheric mass lesions, 965
- Hemobilia, 474
- Hemochromatosis, 55-56, 455  
 rheumatic manifestations of, 816
- Hemodialysis. *see also* Dialysis.  
 in acute kidney injury, 361  
 for chronic kidney disease, 368, 368f, 368.e1f
- Hemoglobin, gas transfer and, 197, 198f
- Hemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>), 657
- Hemoglobin Barts, 513
- Hemoglobin C, 512
- Hemoglobinopathies, 511-513
- Hemoglobinuria, paroxysmal nocturnal, 510, 568
- Hemolysis, as prothrombotic state, 568
- Hemolytic anemia, 502, 755  
 autoimmune, 509t  
 caused by disorders of erythrocyte membrane, 510  
 differential diagnosis of, 508t