

- Hereditary recurrent fever syndromes (*Cont.*):
 familial Mediterranean fever. *See* Familial Mediterranean fever
 genetic considerations in, 2213t
 hyperimmunoglobulinemia D with periodic fever syndrome, 2215
 Muckle-Wells syndrome. *See* Muckle-Wells syndrome (MWS)
 neonatal-onset multisystem inflammatory disease, 2215
 treatment of, 2213t
 tumor necrosis factor- α receptor-associated periodic syndrome, 141, 422, 2214–2215
- Hereditary sensory and autonomic neuropathy (HSAN), 2643, 2679–2680t, 2680
- Hereditary spherocytosis, **651**
 anemia in, 399
 clinical features of, 651–652
 diagnosis of, 652
 genetic considerations in, 651, 652f, 653t
 peripheral blood smear in, 652f
 splenomegaly in, 411
 treatment of, 652
- Hereditary stomatocytosis, 81e-4f, 653f, 653t
- Hermansky-Pudlak syndrome, 375e-2, 730, 1715, 1949t
- Hermaphroditism. *See* Ovotesticular disorders of sexual development
- Hernia(s)
 hiatal, 1902, 1902f
 paraesophageal, 1902
- Herniation, cerebral, 1772, 1772f
- HERNS (hereditary endotheliopathy, retinopathy, nephropathy, and stroke), 2568
- Heroin
 action of, 468e-1
 adverse effects of, 462e-20, 462e-20t, 2199
 systems effects of, 468e-2
 toxic levels of, 2765t
- Herpangina, 231, 238t, 1293
- Herpes gestationis (pemphigoid gestationis), 370t, 372–373
- Herpes gladiatorum, 829, 1178
- Herpes labialis, 215e-7, 215e-8, 238t, 342f, 829
- Herpes simplex virus (HSV)
 adherence of, 145e-1–2, 145e-2t
 gene expression and regulation in, 214e-4
 for gene therapy delivery, 91e-1t
 genome of, 1175
 host response to, 1176
 laboratory identification of, 214e-8, 1180–1181
 ligand-receptor interactions of, 1175
 reactivation mechanisms of, 1175
 structure of, 214e-1f, 1175
- Herpes simplex virus (HSV) infections, **1175**
 actinomycosis and, 1088
 anorectal, 881, 1178, 1956
 “asymptomatic,” 1177
 in burn wounds, 166e-1
 in cancer patient, 487, 488
 diagnosis of, 342, 1180–1181
 disseminated
 clinical features of, 132t, 134, 258, 266
 in immunosuppressed patients, 1176, 1179–1180
 rash in, 132t
 treatment of, 1181, 1182t
- encephalitis
 clinical features of, 1179, 1179f
 complications of, 1179
 differential diagnosis of, 894–896, 895t
 genetic considerations in, 1179
 vs. meningitis, 888
 MRI in, 440e-6f
 pathogenesis of, 1178–1179
 treatment of, 215e-2t, 1179, 1181, 1182t
- epidemiology of, 1176–1177
- genital, 341t
 clinical features of, 880f, 880t, 1178, 1178f
 diagnosis of, 881
 epidemiology of, 869, 879, 1177
- lymphadenopathy in, 408
 in pregnancy, 50
 prophylaxis for, 215e-7, 215e-8, 1181
 recurrence rates of, 1178
 treatment of, 215e-3t, 215e-7, 215e-8–9, 832t, 1181, 1182t
- herpes gladiatorum, 829, 1178
- herpetic whitlow, 1178, 1182t, 1263
- in HIV infection
 perirectal, 1257–1258, 1258f, 1263
 prophylaxis for, 1253t
 treatment of, 1181, 1182t, 1263
- in immunocompromised patients, 1176
- keratitis, 200, 215e-3t, 215e-9, 1178, 1182t
- latent, 1176
- meningitis, 892, 908t, 1179
- neonatal, 50, 215e-2t, 1180, 1182t
- oral-facial
 clinical features of, 238t, 1177–1178
 course of, 238t
 pathogenesis of, 233, 827, 829, 1177–1178
 treatment of, 215e-3t, 215e-7, 233, 1182t
- pathogenesis of, 1175–1176
- in pregnancy, 50, 1180
- prevention of, 1183
- reactivation of, 1176
- skin manifestations of
 distribution, 341t, 342f
 morphology, 341t
 vesicles/bullae, 132t, 238t, 361, 361t, 827, 829
- in transplant recipient
 clinical features of, 921t
 prophylaxis for, 139e-4t, 215e-6, 921
 timing of, 920t
 treatment of, 1181–1183, 1182t
- visceral, 1179–1180
 esophagitis, 1179, 1182t, 1896f, 1910
 liver, 1180
 pharyngitis, 231, 1177
 pneumonitis, 1179–1180
 upper respiratory, 1202t
- Herpesvirus(es). *See also specific viruses*
 gene expression and regulation in, 214e-4
 host defense inhibition by, 214e-8
 microRNAs in, 214e-6
 protein functions of, 214e-6
 structure of, 214e-1, 214e-1f, 214e-2t, 214e-3f
 transmission of, 214e-6
 viral assembly and egress in, 214e-5
- Herpes zoster (shingles), **1184**
 clinical features of, 341t, 1184–1185
 abdominal pain, 105
 chest discomfort, 96t, 98
 glossopharyngeal neuropathy, 2649
 neck pain, 122
 neuropathy, 2685
 ocular, 200
 oral manifestations, 237, 238t
 postherpetic neuralgia, 237, 1185, 1186, 2685
 skin manifestations, 25e-8f, 76e-8f, 827, 1184–1185, 1184f
 trigeminal neuropathy, 2646
- diagnosis of, 1185
 differential diagnosis of, 1185
 epidemiology of, 1184
 in HIV infection, 1185, 1185f, 1252t, 1263
 pathogenesis of, 89, 1183
 prevention of, 485t, 929, 1186, 1186t, 1252t
 in transplant recipient, 921, 921t, 925, 1185
 treatment of, 215e-3–4t, 215e-6–7, 215e-8, 832t, 1186
- Herpes zoster ophthalmicus, 200, 215e-4t, 1184
- Herpes zoster vaccine
 contraindications to, 790t
 recommended administration of, 29t, 84, 787–788f, 893
 storage and handling of, 791
- Herpetic whitlow, 1178, 1182t, 1263
- Herpetiform lesions, 340t
- Hers disease (type VI GSD), 433e-2t, 433e-4
- Hertel exophthalmometer, 207
- HES. *See* Hypereosinophilic syndromes (HES)
- HESX1 gene, 2256
- HESX1 gene mutations, 2325t, 2364, 2364t
- Heterophyes heterophyes, 245e-2t, 765t, 1428t, 1429. *See also* Intestinal flukes
- Heteroplasmy/heteroplasmia, 85e-3–4, 85e-5f, 439
- Heterosexual precocity, 2380
- Heterosexual sexual precocity, 2362
- Heterotropia, 197
- Heterozygote advantage, 438, 442
- Heterozygous, 433f, 435
- Heuristics, 19
- HEV (hepatitis E virus), 2005f, 2006t, 2010. *See also* Hepatitis E virus (HEV) infection
- HEVs (high endothelial venules), 372e-26
- Hexacarbonyls, 2688t, 2689
- Hexagonal-phase phospholipids test, 740
- Hexokinase (HK) deficiency, 654t
- Hexosaminidase A deficiency. *See* Tay-Sachs disease
- Hexose-6-phosphate dehydrogenase (H6PDH), 2312
- Hexoses, genetic disorders of, 435e-1t
- Heyde's syndrome, 731
- HF. *See* Heart failure (HF)
- HFE gene mutations
 global considerations in, 2519
 in hemochromatosis, 367e-1, 367e-1t, 367e-3
 in liver disease, 1992, 2515, 2518
 in porphyria cutanea tarda, 390, 2515, 2530
- 2-HG (2-hydroxyglutarate), 102e-13
- hGH-N gene, 401e-3
- hGH-V gene, 401e-3
- HHIP gene mutations, 1703
- HHS (hyperglycemic hyperosmolar state), 2417t, 2420
- HHV-6 infection. *See* Human herpesvirus-6 (HHV-6) infection
- HHV-7 infection. *See* Human herpesvirus-7 (HHV-7) infection
- HHV-8 infection. *See* Human herpesvirus-8 (HHV-8) infection
- Hiatal hernia, 1902, 1902f
- hic (pneumococcal H inhibitor), 947
- Hidradenitis, neutrophilic eccrine, 366, 380
- Hidradenitis suppurativa, 1099
- HIDS (hyperimmunoglobulinemia D with periodic fever syndrome), 2213t, 2215
- HIF-1 (hypoxia-inducible factor-1), 247
- HIF (hypoxia-inducible factor) 1 α , 333e-4, 392
- High-altitude cerebral edema (HACE)
 clinical features of, 247, 476e-1
 epidemiology of, 476e-1
 pathophysiology of, 476e-1–2, 476e-2f
 prevention of, 476e-2
 risk factors for, 476e-1
 treatment of, 476e-2–3, 476e-2t
- High-altitude illness, **476e-1**
 acute mountain sickness. *See* Acute mountain sickness (AMS)
 cerebral edema. *See* High-altitude cerebral edema (HACE)
 chronic mountain sickness, 248, 476e-5
 cough, 476e-4
 epidemiology of, 476e-1
 gastrointestinal, 476e-4
 genetic considerations in, 476e-1
 hypoxia in, 248
 neurologic events, 476e-4–5
 physiology of, 476e-1
 polycythemia, 399
 preexisting medical issues and, 476e-5
 psychological/psychiatric problems, 476e-5
 pulmonary edema. *See* High-altitude pulmonary edema (HAPE)
 pulmonary hypertension, 476e-6
 sleep impairment, 476e-4
- High-altitude pulmonary edema (HAPE)
 clinical features of, 476e-3, 476e-3f
 pathophysiology of, 47e-4, 247, 476e-3–4
 prevention of, 476e-4, 1764
 risk factors for, 476e-3
 treatment of, 476e-2t, 476e-4, 1764
- High-amplitude propagated contractions, 265