

- for ectopic ACTH syndrome, 611  
for mineralocorticoid excess, 2319  
for pheochromocytoma, 2330
- Adrenal gland**  
anatomy and development of, 2309–2310  
disorders of  
adrenal insufficiency. *See* Adrenal insufficiency  
congenital adrenal hyperplasia. *See* Congenital adrenal hyperplasia (CAH)  
Cushing's syndrome. *See* Cushing's syndrome  
masses  
adrenocortical carcinoma. *See* Adrenocortical carcinoma  
classification of, 2321t  
incidentally discovered, 2321, 2321t, 2322f  
in MEN 1, 2339  
pheochromocytoma. *See* Pheochromocytoma  
mineralocorticoid excess. *See* Mineralocorticoid excess  
steroidogenesis in, 2309, 2309f  
activation/inactivation of, 2311–2313, 2312f, 2313f  
regulatory control of, 2310–2311, 2310f, 2311f, 2314f
- Adrenal hyperplasia**  
congenital. *See* Congenital adrenal hyperplasia (CAH)  
hypokalemia in, 306  
macronodular, 609t  
primary, 306, 1619
- Adrenal hypoplasia congenita**, 2324t, 2364
- Adrenal insufficiency**, 2323  
acute, 2324  
AV conduction block in, 1471t  
in cancer, 1795  
chronic, 2324  
clinical features of, 2324, 2325t, 2326f  
fatigue, 152  
hyperkalemia, 64e-2, 310  
hyponatremia, 299  
hypothermia, 478e-1, 478e-3  
muscle weakness, 462e-19  
shock, 1750  
diagnosis of, 2325, 2327f  
epidemiology of, 2323  
etiology of, 2323–2324, 2324t, 2325t  
HLA gene association with, 373e-8t  
primary, 2323–2324, 2324t. *See also* Addison's disease  
secondary, 2324, 2325t  
in sepsis/septic shock, 1755, 1757  
treatment of, 2325–2327, 2327f
- Adrenal vein sampling**, 1619, 2319
- Adrenarche**, 2357
- Adrenergic crisis**, 1626t, 1627
- Adrenocortical carcinoma**  
aldosteronism in, 1619  
classification of, 2322  
diagnosis of, 2320, 2323f  
genetic considerations in, 2318t, 2321–2322  
incidence of, 2321, 2321t  
in MEN 1, 2339  
staging of, 2322, 2323t  
treatment of, 103e-16, 2322–2323
- Adrenocorticotropic hormone (ACTH)**, 401e-4  
action of, 400e-2, 401e-4  
in adrenal steroidogenesis control, 2310–2311, 2310f, 2312f  
autoantibodies to, 372e-24t  
deficiency of, 372e-24t, 2259t, 2260  
ectopic production of, 610  
clinical features of, 64e-8, 611  
diagnosis of, 611, 2272t  
epidemiology of, 2314t  
etiology of, 64e-8, 609t, 610–611, 2314  
in GI-NETs, 564  
in lung cancer, 511  
skin manifestations of, 360  
treatment of, 611, 2318
- eutopic production of, 608  
excess of. *See* Cushing's syndrome  
expression and regulation of, 401e-1t  
laboratory evaluation of, 2258t, 2272, 2325  
secretion of, 401e-4, 2310  
in shock, 1745  
stimulation test, 1750  
synthesis of, 401e-4, 2310
- Adrenoleukodystrophy**  
clinical features of, 2324t, 2608, 2680  
diagnosis of, 441e-41f, 2325, 2608  
gene therapy for, 91e-2–3  
genetic considerations in, 2323, 2324t, 2680  
Adrenomyeloneuropathy, 2659, 2680–2681
- ADT. See** Androgen deprivation therapy (ADT)
- Adult bile ductopenia**, 284
- Adult growth hormone deficiency**, 2259–2260, 2259t, 2260f
- Adult stem cells**, 453
- Adult T-cell leukemia/lymphoma**, 707  
acute, 225e-4–5  
chronic, 225e-5  
clinical features of, 225e-4–5, 707  
diagnosis of, 81e-10f, 707, 707f  
genetic considerations in, 101e-3, 101e-3t  
HTLV-1 and, 214e-7, 225e-4, 697, 707  
lymphomatous, 225e-5  
paraneoplastic syndromes in, 609  
skin manifestations of, 366, 707  
smoldering, 225e-5, 707  
*Strongyloides* infections and, 225e-4  
treatment of, 225e-5, 707  
tumor markers in, 473t
- Advance care directives**, 58, 66, 475
- Advance care planning**, 58–59, 59t, 475
- Advanced cardiac life support (ACLS)**, 1769–1770, 1769f
- Advanced glycosylation end products**, 2424
- Advanced sleep-wake phase disorder**, 193
- Adventitia**, 265e-1, 265e-1f
- Adverse drug reactions**, 43. *See also* Drug-induced illness; *specific drugs*  
classification, 43  
cytotoxic, 43–44  
diagnosis of, 44  
in elderly, 77–78  
identification of, 32  
idiosyncratic hepatotoxicity, 2023  
immunologic mechanisms of, 44  
incidence of, 43  
treatment of, 44
- Adverse events**, 12e-1, 792
- Advisory Committee on Immunization Practices (ACIP)**, 786
- AE1 (red cell anion exchanger)**, 309
- AED (automated external defibrillation)**, 1769
- Aedes spp. mosquitos**  
in chikungunya virus infection, 1313  
climate change and habitat of, 151e-5, 151e-6f  
in dengue fever, 1318–1319, 1322  
in Eastern equine encephalitis, 1316  
in Jamestown Canyon virus infection, 1315  
in La Crosse virus infection, 1315  
in lymphatic filariasis, 1418t  
in Rift Valley fever, 1322  
in yellow fever, 1322  
in Zika virus infection, 1314
- AEDs. See** Antiepileptic drugs (AEDs)
- Aerobic capacity**, 73, 74f
- Aerobic glycolysis**, 102e-12, 102e-13f
- Aeromonas spp. infections**  
in animal bite-wound, 167e-1  
cellulitis, 830  
clinical features of, 183e-2, 266t  
epidemiology of, 183e-2, 266  
in leech infestations, 2747  
treatment of, 183e-2, 183e-2t, 830
- Aerophagia**, 285
- Aerophobia**, 896, 1301
- AF. See** Atrial fibrillation (AF)
- Afamelanotide**, 2533
- AF amyloidosis**, 719, 723–724. *See also* Amyloidosis
- Afatinib**  
action and targets of, 102e-5t, 103e-16f, 103e-17t, 103e-19  
adverse effects of, 103e-17t, 103e-26  
for lung cancer, 103e-17t, 103e-19, 521, 521t
- Affected sib and relative pair analysis**, 442t
- Afferent loop syndromes**, 1926
- Affirm test**, 873
- Affordable Care Act**, 15e-2, 59
- Aflatoxin**, 102e-2
- Aflatoxin B<sub>1</sub>**, 544, 545t
- Aflibercept**, 205
- AFP. See** a fetoprotein (AFP)
- African eye worm (*Loa loa*) loiasis. *See* *Loa loa* (African eye worm) loiasis**
- Africanized honeybees**, 2749
- African python**, 2747
- African tick-bite fever**, 1155t, 1157
- African trypanosomiasis, human. *See* Sleeping sickness (human African trypanosomiasis)**
- African tumbu fly**, 2747
- Afterdepolarization**, 273e-3–4, 273e-3f
- Afterload**, 265e-8, 265e-9t, 265e-10f
- Agammaglobulinemia**  
genetic considerations in, 2111  
pathophysiology of, 2110f, 2111  
small-intestinal mucosal biopsies in, 1939, 1940t  
X-linked, 377e-2
- Ageism**, 16e-4
- Agent 15 (BZ)**, 262e-1t
- AGEP. *See* Acute generalized eruptive/exanthematous pustulosis (AGEP)**
- Aggregatibacter spp.**, 183e-1, 183e-2t. *See also* Infective endocarditis, HACEK group
- Aggrenox**, 748
- Aging**, 70, 94e-1. *See also* Elderly  
biologic theories of, 77  
cellular processes in, 94e-3  
death rates and, 94e-1f  
definitions of, 94e-1  
disease susceptibility and, 94e-1, 94e-1f  
evolutionary theories of, 94e-1–3, 94e-2f  
genetic influences on, 94e-4–5  
impact on medicine, 94e-1  
longevity dividend and, 94e-1  
metabolic syndrome and, 2449  
mitochondrial DNA mutations and, 85, 85e-8–9, 85e-8f, 94e-3, 94e-5  
nutrient-sensing pathways and, 94e-4–5  
olfactory function and, 214, 214f, 217  
oral health and, 242  
osteoarthritis risk and, 2228  
skin effects of, 387  
sleep patterns and, 185, 185f  
strategies to delay  
caloric restriction, 85, 94e-5–6  
exercise and physical activity, 94e-7  
hormesis, 94e-7  
periodic fasting, 94e-6  
pharmacologic interventions, 94e-6–7, 94e-6f  
systemic effects of. *See also* Frailty  
body composition, 71, 73t  
energetics, 73t, 74f  
homeostatic regulation, 73t, 74f, 75  
hormone levels, 75t  
interaction of, 73f, 76–77  
neurodegeneration, 73t, 75–76  
tissue changes in, 94e-4  
weight regulation and, 275  
world demography of, 93e-1  
dependency and caregiving ratios, 93e-1t, 93e-4–5, 93e-4f  
economic implications, 93e-4  
educational attainment trends, 93e-3  
historical trends in, 93e-1–2  
life expectancy at age 60, 93e-1t  
life expectancy trends, 93e-3–4, 93e-3f  
numbers and percentages aged 60+, 93e-1t, 93e-2, 93e-2f  
numbers and percentages aged 80+, 70f, 71, 71f, 93e-2–3, 93e-3f