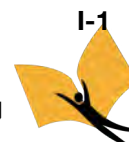


Index

Note: Page numbers followed by c indicate charts; those followed by f indicate figures; those followed by t indicate tables.

- A**
- Abacavir, 1018t, 1059
 - Abatacept, 1073t
 - ABCDEF bundle, 567c
 - ABCDEs of moles, 1856–1857c
 - Abciximab, 661, 735, 1058
 - Abdomen
 - acute, 1297–1305
 - auscultation, 1215–1216
 - percussion and palpation, 1215–1216
 - Abdominal aortic aneurysm
 - assessment and diagnostic findings, 840
 - atherosclerosis and, 840
 - clinical manifestations, 840
 - endovascular and surgical management, 840–841f
 - nursing management, 840–841
 - in older patients, 840
 - pathophysiology, 840
 - pharmacologic therapy, 840
 - Abdominal compartment syndrome (ACS), 282, 1873
 - Abdominal distention, 671
 - Abdominal examination, 671–672, 1215–1216
 - abdominal x-ray, 1421
 - CT scan, 1220
 - ultrasonography, 1217–1218
 - Abdominal injuries, 2232
 - Abdominoperineal resection for carcinoma, 1329f
 - Abduction, 41, 449, 1102f, 1130, 1130, 1179, 1185, 1199–1200
 - A-beta (β) fibers, 201
 - Abiraterone acetate, 1756
 - Ablation, 697, 701–702
 - radiofrequency, 314, 683
 - Abnormal heart sounds, 669–670
 - Abnormal uterine bleeding, 1658
 - Abnormal wound healing, 1888
 - ABO incompatibility, 902
 - Abortion
 - definition, 1664
 - habitual or recurrent, 1664
 - induced
 - medical management, 1665–1666
 - nursing management, 1666
 - types, 1665c
 - medical management, 1664
 - nursing management, 1665
 - spontaneous, 1664
 - ABO system, 899
 - Above-knee amputation (AKA), 856, 1195
 - Abrasion, 399, 573, 670, 861, 1168, 1175, 1819, 1835, 1844, 1851, 1920, 1924–1925, 1998, 2056, 2082, 2191c, 2193–2194, 2211
 - Absolute neutrophil count (ANC), 355, 929, 953
 - Absorption, 179, 1209
 - Abstinence, 1660
 - Acalculous cholecystitis, 1418, 1421
 - Acantholysis, 1846
 - Acarbose, 1505t
 - Acceptance, stages of grief, 384
 - Accessory muscles, 477–479
 - Accidents, 1153
 - Acculturation, 93
 - Acebutolol, 698t, 873t
 - Acetabular fractures, 1183
 - Acetaminophen, 2209t
 - gerontologic considerations, 217
 - IV, 208
 - side effects, 208
 - Acetazolamide, 1373
 - Acetylcholinesterase inhibitor test, 2101
 - Achalasia, 1253–1253f
 - Achilles reflex, 1982–1983
 - Achilles tendon, 1157
 - Achilles tendon, rupture of, 1157
 - Achlorhydria, 1272, 1278
 - Acid–base balance, regulation of, 1539
 - Acid–base disturbances, 258–259
 - blood gas analysis, 264
 - Acidosis
 - metabolic, 259–261, 1570
 - respiratory, 262–263
 - Acinetobacter sp., 533, 1316, 2154
 - Acini, 1446
 - Acne treatment, 1787
 - Acne vulgaris, 1832–1834
 - assessment and diagnostic findings, 1832
 - clinical manifestations, 1832
 - medical management
 - antibiotic agents, 1833
 - estrogen therapy, 1834
 - nutrition and hygiene therapy, 1832–1833
 - pharmacologic treatments, 1833
 - phototherapy, 1834
 - prevention of scarring, 1834
 - salicylic acid preparations, 1833
 - nursing management, 1834
 - pathophysiology, 1832
 - surgical management, 1834
 - Acoustic neuromas, 1957–1958, 2114
 - Acquired (adaptive) immunity, 989
 - Acquired bleeding disorders
 - heparin-induced thrombocytopenia (HIT), 939–840
 - liver disease, 939
 - vitamin K deficiency syndrome, 939
 - Acquired immune deficiency syndrome (AIDS), 80, 534, 1007
 - epidemiology, 1008–1009
 - gerontologic considerations, 1009
 - Acrocyanosis, 844
 - Acromegaly, 1450
 - Acrosyndromes, 844
 - Actinic cheilitis, 1230t
 - Active transport, 228
 - Activities of daily living (ADLs), 37, 143, 174
 - assessment of, 37
 - nursing process, 37–40
 - Acute abdomen
 - appendicitis, 1298–1300
 - diverticular disease, 1300–1302
 - intestinal obstruction, 1302–1305
 - peritonitis, 1297–1298
 - Acute alcohol intoxication, 2205–2210
 - Acute bacterial rhinosinusitis (ABRS), 499
 - assessment and diagnostic findings, 499
 - clinical manifestations, 499
 - complications, 500
 - medical management, 500
 - nursing management, 500–501
 - symptoms of, 499
 - Acute compartment syndrome, 1162–1164, 1169
 - assessment and diagnostic findings, 1162–1163
 - medical management, 1163–1164
 - nursing management, 1164
 - Acute coronary syndrome (ACS), 726, 737
 - assessment and diagnostic findings, 738c
 - ECG changes, 738–739
 - echocardiogram, 739
 - laboratory tests, 739–740
 - patient history, 738
 - cardiac rehabilitation, 741
 - clinical manifestations, 738
 - medical management
 - emergent percutaneous coronary intervention, 740
 - inpatient management, 740–741
 - thrombolytic therapy, 740–741c
 - nursing process, 742–745
 - pathophysiology, 737–738
 - Acute generalized exanthematous pustulosis (AGEP), 1058
 - Acute hemolytic reaction, 902
 - Acute/intermediate phase of burn, 1876
 - Acute intermittent peritoneal dialysis, 1587–1588
 - Acute kidney injury (AKI), 1564
 - assessment and diagnostic findings, 1567
 - categories, 1565
 - causes, 1566c
 - classifications of, 1565
 - RIFLE, 1565t
 - clinical manifestations, 1566
 - COVID-19 and, 1564–1565
 - medical management
 - nutritional therapy, 1569
 - pharmacologic therapy, 1568–1569
 - nursing management, 1569–1570
 - in older adults, 1568
 - pathophysiology, 1565
 - phases, 1565–1566
 - prevention, 1567–1567c
 - Acute liver failure (ALF), 1392–1393
 - Acute lung injury (ALI), 279, 282, 1876
 - Acute lymphocytic leukemia (ALL)
 - clinical manifestations, 956–957
 - medical management, 957
 - nursing management, 957
 - nursing process, 959–962



- Acute mastitis, 1711c
- Acute myeloid leukemia (AML), 951–955
assessment and diagnostic findings, 953
clinical manifestations, 953
complications of, 954–955
medical management, 953–954
nursing management, 955
- Acute myocardial infarction
assessment and diagnostic findings, 738c
treatment guidelines, 740c
- Acute nephritic syndrome, 1558–1558f
- Acute otitis media (AOM), 1948–1949
- Acute pain, 198
- Acute pancreatitis
affecting older adults, 1429
assessment and diagnostic findings, 1430
clinical manifestations, 1430
intensive care, 1431
medical management, 1431
placement of biliary drains, 1431
surgery, 1431
mortality rate, 1430c
nursing management, 1432–1433
pain management, 1431
pathophysiology, 1429–1430
plan of nursing care, 1434c–1436c
postacute management, 1431–1432
respiratory care, 1431
- Acute pharyngitis
assessment and diagnostic findings, 503–504
clinical manifestations, 503
medical management, 504
nursing management, 504
nutritional therapy, 504
pathophysiology, 503
signs and symptoms, 503
- Acute pyelonephritis, 1610
- Acute radiation syndrome (ARS), 2238–2239, 2239t
- Acute respiratory distress syndrome (ARDS), 262, 279, 279, 466, 466, 483, 542, 542, 571–573, 571f, 571t, 1876
among patients with COVID-19, 573–574
assessment and diagnostic findings, 572
clinical manifestations, 571–572
medical management
nutritional support, 572
PEEP support, 572
pharmacologic treatment, 572
nursing management, 572–573
analgesia, 573
ventilator considerations, 572–573
pathophysiology, 571–571f
risk factors, 571c
- Acute respiratory failure, 528f, 530–531, 556–571
clinical manifestations, 556
early signs, 556
medical management, 556
nursing management
endotracheal intubation, 556–557
mechanical ventilation, 559–571
tracheotomy, 557–559
pathophysiology, 556
- Acute rhinosinusitis, 499–501
- Acute subdural hematoma (SDH), 2059
- Acute strains, 1153
- Acute tracheobronchitis
clinical manifestations, 531
fungal infections, 530
medical management, 531
antibiotics, 531
antihistamines, 531
cool vapor therapy, 531
suctioning and bronchoscopy, 531
nursing management, 531
pathophysiology, 530–531
sputum culture, 530
viral infections, 530
- Acute urticaria, 1059
- Acute vaso-occlusive crisis, 920
- Acute viral rhinosinusitis (AVRS)
assessment and diagnostic findings, 499
clinical manifestations, 499
complications, 500
medical management, 500
nursing management, 500–501
pathogens associated with, 499
pathophysiology, 499
symptoms of, 499
- ADA Amendments Act of 2008, 150
- Adaptation, 98
- Adaptive devices, 36
- Addisonian crisis, 1477–1478, 1481
- Addison's disease
assessment and diagnostic findings, 1477
clinical manifestations, 1477
medical management, 1477
nursing management, 1477–1479
- Adduction, 41c, 408, 1102f, 1130, 1130
- A-delta fibers, 199, 201
- Adenoiditis, 505–506
- Adenoids, 463–464
- Adenomatous polyposis gene (APC), 1325
- Adenomyosis, 1694
- Adenosine, 575, 677–678, 697, 703–704
- Adenosine diphosphate receptor antagonists (P2Y₁₂), for angina, 735
- Adenosine triphosphate (ATP), 106, 254, 274, 274, 1100, 1100–1101, 2033
- Adherence, 57–58
definition, 57
factors affecting, 57–58
- Adiposopathy, 1344
- Adjunct medications for heart failure, 803
- Adjuvant analgesic agents, 208
- Adjuvant chemotherapy, 515, 1731–1732, 1732t
- Adjuvant hormonal therapy, 1733–1734, 1734t
- Adnexa, 1643
- Adnexal palpation, 1652
- Adolescents
health promotion programs for, 66
nutritional assessment, 86
- Adrenal cortex, 1474
- Adrenalectomy, 1476, 1480–1481, 1483
- Adrenal enzyme inhibitors, 1480
- Adrenal functions, 231
- Adrenal glands, 1474
- Adrenaline, 1047, 1074, 1474
- Adrenal medulla, 1474
- Adrenergic agents, for allergic rhinitis, 1050–1051
- Adrenocortical insufficiency. *See* Addison's disease
- Adrenocorticotrophic hormone (ACTH), 100–101, 103, 105, 257, 1001, 1449–1451, 1474, 1477, 1479–1480, 2016, 2114
- Adrenogenital syndrome, 1474
- Adult children of African immigrants, cultural beliefs, perceptions, and practices of, 93c
- Adult-onset genetic conditions, testing and screening of, 127–128, 128t–129t
nursing role in, 130
- Adult (or Child) Protective Services, 186, 2212
- Adults, health promotion programs for, 66–68, 67t
- Adult-type progressive TB, 547
- Adult voiding dysfunction, 1611–1620
- Advanced cardiovascular life support, 814
- Advanced care planning, 375–376
- Advance directives, 90–191, 278, 278
- Advanced practice registered nurses (APRNs), 34
- Adventitia, 818
- Adventitious sounds, 482–483t
- Adverse drug effects, 1540
- Advisory Committee on Immunization Practices (ACIP), 275, 1389, 1681–1682, 1752
- Aerobacter aerogenes*, 456
- Aerosol delivery devices, 615t
- Aerosol masks, 614
- Aerosols, 1820
- Affordable Care Act (ACA), 132, 132, 150, 150, 151, 160, 160, 372, 372, 1641
- Aflatoxin, 1405
- Afrezza, 1500t
- African Americans, hypertension in, 866, 877c
- After-death care, 381
- After-death rituals, 382–383, 385
- Afterload, 656
- Age/aging
alcohol and drug misuse, 181
burn injury, 1867
cognitive aspects of, 178–179
coping patterns, 176
delirium and, 182
demographics of, 167
depression and, 181
with disability, 190
ethical and legal issues affecting, 190–191
gastrointestinal system and, 172–173
genitourinary system and, 172
health care costs of, 189–190
hospice and palliative care, 190
integumentary system and, 171–172
living arrangements, 176–178
musculoskeletal system and, 174
nervous system and, 174–175
nutritional health, 173
pharmacologic aspects of, 179–180
physical aspects of, 168–176
psychosocial aspects of, 176–178
reproductive system and, 172
respiratory system and, 171, 471t
sensory system and, 175–176
sleep, 173–174
theories of, 168
- Ageism, 176
- Agency for Healthcare Research and Quality (AHRQ), 603
- Age-related changes
altered pharmacokinetics, 179, 180t
cardiovascular changes, 169
cellular and extracellular changes, 168
gastric changes, 172–173
hearing loss, 175
mobility, 174
neurologic, 174–175



- renal function, 172
- respiratory efficiency, 171
- risk of malnutrition, 173
- senses of taste and smell, 172–173, 176
- sexual activity, 172
- skin changes, 171–172
- sleep quality, 173
- vision, 175
- Age-related macular degeneration, 175, 1902, 1922–1923
- Agglutination, 992
- Agitation, reduction of, 185
- Agnosia, 1982–1982t, 2033
- Agonist–antagonist opioids, 209
- Agonists, 209
- Agranulocytes, 888f, 889
- AIDS-related anorexia, 1025
- AIDS-related lymphomas, 1023
- Airborne bacteria, 422, 1588
- Airborne precautions, 2151–2152c
- Air embolism, 267
- Air pressure variances, 466
- Air trapping, 616, 627
- Airway clearance, 619–625
- Airway edema, 633
- Airway management, 420, 430, 507, 565, 2037
- Airway obstruction, 2187–2189
 - assessment and diagnostic findings, 2187
 - clinical manifestations, 2187
 - management, 2187–2189
 - cricothyroidotomy, 2189
 - endotracheal intubation, 2188
 - establishing an airway, 2187–2189
 - maintaining ventilation, 2189
 - pathophysiology, 2187
 - signs and symptoms of, 2187
- Airway pressure release ventilation (APRV), 562
- Airway resistance, 466–466c
- Akathisia, 2129
- Akinetic mutism, 1993
- Alanine aminotransferase (ALT), 279, 1347, 1369
- Alarm fatigue, 563–564, 675–677, 695
- Alaryngeal communication, 517
- Alberta Stroke Program Evaluation of Computed Tomography (ASPECT) score, 2036
- Albuterol, 247, 297, 617t, 634, 635t–636t
- Alcohol abuse, 403
- Alcohol consumption, diabetes and, 1496
- Alcoholic cirrhosis, 1368, 1393
- Alcoholics Anonymous, 1241, 1384, 1404, 1433
- Alcohol withdrawal syndrome, 2210
- Aldosterone, 230–231
- Aldosterone antagonists, 800
- Aldrete score, 442–443f
- Aldrete score form, 438, 442–443f
- Alefacept, for psoriasis, 1844
- Alemtuzumab, 959
- Alfentanil, 426t
- Alfuzosin, for BPH, 1754
- Alginate, 1816–1817t
 - calcium, 1818
- Algorithm, use of, 9
- Aliskiren, for hypertension, 874t
- Alkaline phosphatase (ALP), 1111, 1137, 1369, 1372, 1377, 1395, 1405–1406, 1791
- Alkalizing agents, 261
- Alkalosis, 243
 - metabolic, 244–245, 257–259, 261–262, 261–262
 - respiratory, 255, 263
- Alkylating agents, 321t
- Alkylating agents, for multiple myeloma, 978t
- Alleles, 120, 123f
- Allergen desensitization, 1047
- Allergen immunotherapy (AIT), 1052–1053
- Allergens, 1039, 1069
- Allergic disorders, 1045
 - allergic rhinitis, 1048–1054
 - anaphylaxis, 1046–1047
 - angioneurotic edema, 1059
 - assessment form, 1042–1044c
 - atopic dermatitis, 1057
 - atopic diseases, 1045
 - cold urticaria, 1060–1061
 - contact dermatitis, 1056–1057
 - diagnostic evaluation, 1044
 - complete blood count with differential, 1044
 - eosinophil count, 1044
 - provocative testing, 1045
 - serum-specific IgE test, 1045
 - skin testing, 1044–1045, 1045f
 - total serum IgE levels, 1044
 - drug hypersensitivity, 1057–1059
 - food allergy, 1061–1062
 - hereditary angioedema, 1060
 - latex allergy, 1062–1064
 - nonatopic disorders, 1045
 - urticaria, 1059–1060
- Allergic reactions, during a transfusion, 903
- Allergic rhinitis, 1048–1056
 - assessment and diagnostic findings, 1049
 - clinical manifestations, 1049
 - home care checklist, 1055c–1056c
 - medical management, 1049–1052
 - avoidance therapy, 1049
 - immunotherapy, 1052–1054, 1053c
 - pharmacologic therapy, 1049–1052, 1051t–1052t
 - nursing process
 - assessment, 1054
 - diagnosis, 1054
 - evaluation, 1055–1056
 - nursing interventions, 1054–1055
 - planning and goals, 1054
 - pathophysiology, 1049
- Allergy, 998, 998, 1039, 1039
 - asthma and, 633
 - latex, 402, 405, 431, 431, 433, 643, 1062–1064
 - to local anesthetics, 217
- Alloantibodies, 926
- Allodynia, 202
- Allogeneic HSCT (AlloHSCT), 326, 326–327, 955, 957, 959, 963, 968, 977
- Allogeneic vaccines, 331
- Allograft, 779, 1147, 1156, 1164, 1164–1165
- Allopurinol, 954, 1058, 1058–1059, 1090, 1622, 1848
- Alogliptin, 1505t
- Alopecia, 318, 349, 978t, 1083, 1390, 1702, 1732–1733, 1800, 1811, 1811–1812
 - definition, 318, 327, 336
 - nursing interventions, 342c
 - nursing management, 349
- Alosetron, 1295
- Alpha-adrenergic agonists, 1050
- Alpha-adrenergic blockers
 - for benign prostatic hyperplasia (BPH), 1753–1754
 - for pheochromocytoma, 1476
- Alpha₁-antitrypsin deficiency, 603, 605, 607
- Alpha cells, 1417, 1490, 1513
- Alpha-fetoprotein (AFP), 928, 1217
 - in primary liver cancer, 1405
- Alpha-glucosidase inhibitors, 1505t
- Alpha-interferon, in hepatitis B, 1389
- Alphanate, 896
- Alprostadil, 1749t, 1750
- Alteplase (Activase, t-PA), 740
 - for venous thromboembolism, 849t
- Altered drug responses in older adults, 180t
- Altered level of consciousness (LOC)
 - assessment and diagnostic findings, 1994
 - clinical manifestations, 1994
 - definition, 1993
 - description, 1994
 - management, 1994
 - nursing process, 1994–1999, 1996t
 - pathophysiology, 1993–1994
- Altered pharmacokinetics, 179
- Altered skin integrity, 318
- Altretamine, 321t
- Aluminum carbonate, 1473
- Alveoli, 465
- Alzheimer's disease (AD), 182–186
 - assessment and diagnostic findings, 184
 - balanced activity and rest, promotion of, 185–186
 - clinical manifestations, 183–184
 - cognitive function, improving, 184
 - communication in, improvement of, 185
 - community care, 186
 - death rate, 182
 - early-onset, 182
 - emotional support, 185
 - familial, 182–183
 - medical management, 184
 - nursing management, 184–186
 - nutrition, promotion of, 185
 - pathogenesis of, 183
 - physical safety in, promotion of, 185
 - prevalence of, 182
 - self-care activities in, promotion of, 185
 - socialization and intimacy needs, 185
 - transitional care, 186
- Ambulation, 43–44
- Ambulatory blood pressure measurement (ABPM), 869
- Ambulatory electrocardiography, 675–676
- Ambulatory surgeries, 397, 400, 410–411
- Amenorrhea, 1657–1658
- American Academy of Family Physicians (AAFP), 876
- American Cancer Society (ACS), 1709
- American College of Cardiology and American Heart Association (ACC/AHA)
 - for ACE inhibitor, 802
 - classification of heart failure, 799t, 804
 - classification system for hypertension, 866–866t
 - dosage of diuretic, 800
- American College of Medical Genetics and Genomics, 132
- American College of Obstetricians and Gynecologists (ACOG), 133



- American College of Physicians (ACP), 876
 American Geriatric Society (AGS), 218
 American Joint Replacement Registry (AJRR), 1125
 American Lung Association, 474
 American Psychological Association (APA), 211
 American Society for Pain Management Nursing (ASPMN), 378
 American Society for Parenteral and Enteral Nutrition (ASPEN), 1246
 American Society of Anesthesiologists (ASA), 407
 Physiologic Classification System, 420
 American Society of Clinical Oncology (ASCO), 320
 Americans With Disabilities Act of 1990 (ADA), 142, 146, 148
 Amine hormones, 1447
 Aminoglycosides, 328
 Amlodipine, 844
 Ammonia conversion, 1366
 Amoxicillin, 1269t
 Amphotericin B, 328
 Amputation, 1193–1195
 above-knee amputation (AKA), 1195
 complications, 1195
 home care checklist, 1201c
 level of, 1195
 medical management, 1195–1196
 nursing process, 1196–1202
 rehabilitation, 1196
 Amsler grid testing, 1902
 Amylase, 1210
 Amyloid precursor protein, 183
 Amyotrophic lateral sclerosis, 2131–2132
 Anabolic steroids, 2209t
 Anal fissure, 1334–1335
 Anal fistula, 1334
 Analgesic anticonvulsant therapy, 217
 Analgesic medications
 co-analgesic agents, 216–218
 dual-mechanism, 214
 nonopioid, 208–209
 opioid, 209–216
 Anaphylactic shock, 296, 1046
 medical management, 296–297
 Anaphylactoid reaction, 1046
 Anaphylaxis, 431, 1041, 1046–1047
 clinical manifestations, 1046
 common causes of, 1046c
 defining characteristics, 296
 local or systemic reactions, 1046
 medical management, 1047
 nonallergenic, 1046
 nursing management, 1047
 pathophysiology, 1046
 penicillin for, 1046
 prevention, 1047
 signs and symptoms of, 296
 venom immunotherapy for, 1047
 Anatomic stage group, 312
 Ancestry of patients and families, genetic assessment, 132
 Androgen deprivation therapy, 1760
 Androgenic alopecia, 1811–1812
 Androgens, 1474
 Anemia, 802, 1570
 aplastic, 916–917
 assessment and diagnostic findings, 911
 causes, 910–911, 911c
 classification of, 910t
 clinical manifestations, 911
 glucose-6-phosphate dehydrogenase (G-6-PD) deficiency, 926
 hemolytic, 919
 immune hemolytic, 926–927
 of inflammation, 916
 iron deficiency, 914–916
 medical management, 911–912
 gerontologic considerations, 911–912
 megaloblastic, 917–919
 nursing process, 912–914
 assessment, 912
 diagnosis, 912–913
 evaluation, 913–914
 nursing interventions, 913
 planning and goals, 913
 pathophysiology, 910–911
 in renal disease, 916
 severity of, 911
 sickle cell, 919–925
 symptoms, 911
 thalassemias, 925–926
 Anesthesia, 424
 administration of, 426–428
 approaches, 397
 awareness, 430–431
 complications associated with
 anaphylactic reaction, 431
 hyperthermia, 432
 hypothermia, 431–432
 hypoxia, 431
 nausea and vomiting, 431
 epidural, 428–429
 for eye, 1908
 inhaled anesthetic agents, 425–426, 425t
 local, 430
 multimodal, 428
 peripheral nerve blocks (PNBs), 429
 regional, 428
 regional and local anesthetic agents, 429t
 spinal, 429
 Anesthesiologist, 420
 Aneuploidy, 124
 Aneurysms, 825, 838–841
 abdominal aortic, 840–841
 artery, 841
 etiologic classification of, 839c
 thoracic aortic, 839
 Angina pectoris
 clinical manifestations, 733
 gerontologic considerations, 733
 home care, 737c
 intractable or refractory angina, 733c
 medical management
 antiplatelet medications, 735
 beta-adrenergic blocking agents, 734
 calcium channel blockers, 734–735
 drugs, 733–734t
 nitroglycerin, 733
 oxygen therapy, 735
 nursing process, 735–737
 pathophysiology, 732–733
 silent ischemia, 733c
 stable angina, 733c
 unstable angina, 733c
 variant angina, 733c
 Angioedema, 1046, 1059
 bradykinin-mediated, 1059–1060
 hereditary, 1060
 mast cell-mediated, 1059
 regions involved in, 1059
 Angiography, 825–826, 1902–1903
 Angiomas, 1852
 Angioneurotic edema, 1059
 Angiotensin-converting enzyme (ACE)
 inhibitors, 472, 801, 1060, 2036
 for hypertension, 871–872t
 Angiotensin receptor blockers (ARBs), 801
 for hypertension, 871–872t
 Angiotensin receptor-neprilysin inhibitors (ARNIs), 802
 Animal and human bites, 2200
 Ankle-brachial index (ABI), 823
 avoiding errors in, 824c
 range of pressure and ischemic manifestations, 824c
 Ankylosing spondylitis, 1088
 Annuloplasty, 772
 Anorectal abscess, 1334
 Anorexia, 350, 1178
 at end-of-life, 380–380t
 Anoscopy, 1224
 Antagonists, 210
 Anterior cord syndrome, 2071c
 Anterior cruciate ligament (ACL), 1156
 Anterior pituitary gland, 1449–1450
 Anthrax, 2232–2234
 Antibacterial sulfonamides, 1058
 Antibody, 990, 992
 Anticentromere antibody (ACA), 1085
 Anticholinergics, 634
 Anticipatory grief, 384
 Anti-citrullinated peptide antibody (ACPA), 1079, 1085
 Anticoagulants, 803
 for VTE, 847–849t
 Antidepressant co-analgesic medications, 217
 Antidepressant therapy, for HIV infections, 1025
 Antidiarrheal therapy, 1025
 Antidiuretic hormone (ADH), 230, 232, 237, 241, 275, 1450, 1452, 1538
 Anti-embolism stockings, 1186
 Antigen, 990
 Antigen-antibody binding, 992–993
 Antigenic determinant, 992
 Antigen-presenting cells (APCs), 308
 Antigen recognition, 991–992
 Antigens
 complete protein, 1039
 functions of, 1039
 low-molecular-weight substances, 1039
 Antihistamine, 1040
 for allergic rhinitis, 1051t
 Antihistamines, 903
 for allergic rhinitis, 1049–1050
 for anaphylactic reactions, 1047
 for atopic dermatitis, 1057
 Anti-infective medications, 1908–1909
 Antimicrobial dressings, 1818
 Antinuclear antibody (ANA), 1084
 Antiphospholipid antibody syndrome, 946
 Antiretroviral therapy (ART), 1007, 1010–1011, 1014, 1016–1018c
 agents, 1018t–1020t
 drug resistance, 1020–1021
 Antithrombin deficiency, 945
 Antithrombotic drugs, 700–701



- Antithymocyte globulin (ATG), 963
 Antithyroid medications (thionamides), 1463–1464
 Anxiety, 441, 1177, 1268
 at end-of-life, 380–381
 in patients with HF, 807
 Aortic dissection
 assessment and diagnostic findings, 842
 clinical manifestations, 842
 medical management, 842
 nursing management, 842
 pathophysiology, 841–842
 Aortic regurgitation, 769
 Aortic valve autografts, 774
 Aortic valve stenosis, 769–770
 Aortoiliac disease, 838
 Aphasia, 2033
 Apheresis, 895–896t
 Aphthous stomatitis, 1230t
 Aplastic anemia, 916–917
 assessment and diagnostic findings, 916
 clinical manifestations, 916
 medical management, 916–917
 nursing management, 917
 pathophysiology, 916
 Apoptosis, 304, 990
 Appendicitis, 1298–1300
 assessment and diagnostic findings, 1299
 clinical manifestations, 1299
 complications, 1299
 gerontologic considerations, 1299
 medical management, 1299–1300
 nursing management, 1300
 pathophysiology, 1299
 Applied ethics, 25
 Appraisal, 100
 Apraxia, 2033
 Area Agencies on Aging (AAAs), 189
 Aromatase inhibitors, 1733
 Aromatic antiepileptic drugs, 1058
 Arrhythmias, 440–441, 691
 adjunct modalities and management, 712–723
 atrial, 697–704
 conduction abnormalities, 708–710
 junctional, 704–705
 medications, 698t
 nursing process, 710–712
 sinus node, 696–697
 ventricular, 705–708
 Arterial blood gas (ABG) studies, 487
 Arterial disorders
 aneurysms, 838–841
 aortic dissection, 841–842
 aortoiliac disease, 838
 arterial embolism and arterial thrombosis, 842–844
 arteriosclerosis and atherosclerosis, 826–833
 peripheral artery disease, 833–837
 Raynaud phenomenon, 844
 upper extremity arterial occlusive disease, 837–838
 Arterial embolism, 842–844
 Arterial pulses
 amplitude, 666–667
 contour, 667
 palpation of, 667
 rate, 666
 rhythm, 666
 Arterial thrombosis, 842–844
 Arterial ulcers, 855
 Arteries, 818, 1970
 Arterioles, 818
 Arteriosclerosis, 826–833
 Arteriovenous fistula (AVF), 1579
 Arteriovenous graft, 1579–1580
 Arteriovenous malformations, 2049
 Arthritis
 psoriatic, 1088–1089
 reactive, 1088
 rheumatoid
 assessment and diagnostic findings, 1079
 clinical manifestations, 1078–1079
 medical management, 1079–1081
 nursing management, 1081–1082
 pathophysiology, 1078
 septic, 1145
 Arthrocentesis, 1111
 Arthrography, 1110
 of rotator cuff tears, 1154
 Arthroplasty, 1124
 total hip, 1126–1129c, 1130–1133
 total knee, 1134
 Arthropod-borne viruses, 2093
 Arthroscopy, 1110–1111
 Artificial larynx, 517
 Arytenoid cartilages, 464
 Ascites
 assessment and diagnostic findings, 1373
 clinical manifestations, 1373
 medical management, 1373–1374
 bed rest, 1373
 nutritional therapy, 1373
 paracentesis, 1374
 pharmacologic therapy, 1373
 transjugular intrahepatic portosystemic shunt (TIPS), 1374
 nursing management, 1374–1375
 pathophysiology, 1372–1372f
 ASCVD Risk Estimator Plus, 870
 Aspergillus, 328
 Aspiration, 1244
 fecal contamination and, 545
 pathophysiology, 545
 prevention, 545–546, 546c
 compensating for absent reflexes, 545–546
 delayed emptying of stomach, 546
 feeding tube placement, 546
 prolonged ET intubation or tracheostomy, management of, 546
 risk factors, 545c
 Aspiration pneumonia, 534, 545
 Aspirin, 406, 735, 1217
 Assessment
 of abdomen, 671–672
 of allergy, 1042–1044c
 breast, 1709–1717
 of cardiovascular system
 diseases, 665t
 health history, 657–664
 physical assessment, 664–672
 chest pain, 659t–660t
 chronic obstructive pulmonary disease (COPD), 607c
 comprehensive pain, 203–206
 cultural, 91–94, 92c
 dermatologic disorders, 1802–1812
 of ear, 1936–1943
 of endocrine system, 1446–1449
 of eye, 1897–1903
 family history, 134
 of female reproductive system, 1641–1652
 findings in common respiratory disorders, 484t
 focused, 84
 health history, 470–474
 health of people with disability, 81c
 hematologic diagnosis, 891–892
 of liver, 1365–1370
 of lungs, 671
 of male reproductive system, 1744–1747
 mental status, 178c
 of nervous system, 1977–1984
 of neutropenic fever in cancer patients, 356t
 nutritional, 85–91, 86t, 87c, 89t
 pain, 84
 person's genetic and genomic health status, 134–136
 preferred language for assessing goals of care, 375c
 preoperative, 402
 pretransfusion, 900
 psychosocial, 136–136c
 psychosocial factors related to respiratory function and disease, 474c
 of skin and extremities, 664–665
 of stress, 104c
 symptoms at end-of-life, 376–377
 in teaching–learning process, 61
 Assisted living facilities, 177–178
 Assisted reproductive technologies, 1667–1668
 Assistive technology, 36
 ambulating with, 44–45
 nursing actions involved in using, 47t
 Association for Professionals in Infection Control and Epidemiology (APIC), 422
 Association of Rehabilitation Nursing (ARN), 36
 Asthma, 485t, 632
 action plan, 640f
 acute exacerbations of, 633
 allergy and, 633
 assessment, 633–634
 clinical manifestations, 633
 complications, 634
 continuing/transitional care, 641–642
 deaths from, 632
 diagnostic findings, 633–634
 exacerbations, management of, 639
 home care checklist, 641c
 immunoglobulin E (IgE), 633, 639
 long-term medications for treatment, 635t–638t
 medical management, 634
 long-acting control medications, 639
 pharmacologic treatment, 634
 quick-relief medications, 634–635t
 morbidity and mortality in, 633
 nursing management, 641–642
 pathophysiology, 632f, 633
 peak flow monitoring, 639–641, 641c
 prevention, 634
 promoting home/community-based/transitional care, 641
 quick-relief medications for treatment, 634–639, 635t
 smoking and, 633
 stepwise approach for managing, 632f



- Atelectasis, 466, 1178
 acute, 527
 assessment and diagnostic findings, 529
 causes, 528
 chronic, 527, 529
 clinical manifestations, 529
 consequences of, 528–529
 goal of treatment, 530
 management, 530
 ICOUGHSM program, 530c
 SVN treatments with bronchodilator, 530
 obstructive, 528
 pathophysiology, 528–529, 528f
 in patients with chronic airway obstruction, 528
 prevention, 529–530, 530c
 incentive spirometry, 529c
- Atheromas, 726
- Atherosclerosis, 826–833
- Atidiuretic hormone (ADH), 101
- Atonic muscle, 1101
- Atopic dermatitis, 1057
- Atopic diseases, 1045
- Atopic march, 1057
- Atopy, 1039
- Atrial fibrillation, 699–702
 abnormal impulse formation, 699
 assessment and diagnostic findings, 700
 cardiac rhythm therapies, 702
 characteristics, 700
 classification system, 699c
 electrical cardioversion for, 701–702
 left atrial appendage occlusion, 702–703
 medical management
 antithrombotic drugs, 700–701
 for cardioversion, 701
 for controlling heart rate, 701
 patterns, 699
 Wolff-Parkinson-White (WPW) syndrome, 703
- Atrial flutter
 characteristics, 703
 medical management, 703–704
 signs and symptoms, 703
- Atrial natriuretic peptide (ANP), 232
- Atioventricular (AV) node, 653
- Atioventricular nodal reentry tachycardia, 704–705
- Atioventricular valves, 653
- Atrophic vaginitis, 1678t
- Atrophy, 105, 1101
- Atypical hyperplasia, 1719
- Audiometry, 1941–1942
- Auditory brain stem response (ABR)
 audiometry, 1942
- Auditory changes, age-related, 175
- Augmentation mammoplasty, 1739
- Aural rehabilitation, 1958–1961
- Auricle, 1936
- Auscultation, 85, 1215–1216
- Auscultation procedure, 670
- Autografts, 774–775, 1164, 1882–1883
- Autoimmune disorders, 998
- Autoimmunity, 1068–1069
- Autologous blood donation, 898
- Autologous HSCT (AuHSCT), 977
- Autolytic débridement, 1817
- Autonomic nervous system, 1973
- Autonomic neuropathies, 1524–1524
- Autosomal dominant inheritance, 121–122, 122t
- Autosomal recessive inheritance, 122t, 123
- Autosomes, 119
- Avascular necrosis, 1124
- Avascular necrosis of bone (AVN), 1165
- Avoidance therapy, 1049
- Avulsion, 1158f
- Axon, 1967
- Azathioprine, 1308
- Azotemia, 1559
- B**
- Babinski reflex, 1984
- Bacille Calmette–Guérin (BCG), 329, 1627
- Bacillus anthracis*, 2146
- Baclofen, 2042, 2097
- Bacteremia, 291, 536, 786, 1021, 1394, 1591, 2154, 2167
 definition of, 2154
- Bacteria
 carcinogenesis and, 304–305
 gram-negative, 336
 gram-positive, 336
- Bacterial infection, biologic spectrum, 2149f
- Bacterial peritonitis, cirrhosis and, 1394
- Bacterial vaginosis, 1678–1679, 1678t, 1685
 clinical manifestations, 1679
 medical management, 1679
 risk factors, 1678
- Bacteriuria, 1543t, 1548, 1599, 1606–1610
- Bad breath. *See* Halitosis
- BAERs. *See* Brainstem auditory evoked responses
- BAHA. *See* Bone-anchored hearing aid
- BAL (bioartificial liver), 1393
- Balanced suspension traction, 1174, 1174f
- Ball-and-socket joints, 1100
- Balloon sign test, 1107f
- Balloon tamponade, for variceal bleeding, 1377–1379
- Balloon valvuloplasty, 771, 771f, 772, 773, 775
- Ballottement technique, 1107, 1107f
- Bandages. *See also* Dressings
 drainage-soaked, 446
 sterile gauze, 452
- Band cells, 889
- Bargaining, stages of grief, 384
- Bariatric surgery, 914, 917, 1136, 1354
 and bile reflux, 1358
 bowel/gastric outlet obstruction after, 1359
 and dietary guidelines, 1358c
 dumping syndrome and, 1358–1359
 and dysphagia, 1359
 hemorrhage after, 1358
 nursing process, 1355–1360
 anastomotic leaks and, 1357
 anxiety reduction, 1357
 assessment, 1355
 body image changes, 1357–1358
 bowel habits maintenance, 1358
 complications management, 1358–1359
 continuing and transitional care, 1360
 diagnosis, 1355
 dietary restrictions, 1355
 evaluation, 1360
 fluid volume balance, 1357
 infection prevention, 1355
 nursing interventions, 1355–1360
 nutritional status, 1357
 pain relief, 1355
 patient education, 1358
 planning and goals, 1355
- selection criteria for, 1354, 1354c
 type of procedures, 1354–1355, 1356f
 and venous thromboembolism, 1358
- Baroreceptors, 232, 655
- Barrel chest, 477, 606
- Barrett esophagus (BE), 1257
 assessment and diagnostic findings, 1257
 clinical manifestations, 1257
 Gastroesophageal reflux disease (GERD), 1257
 management, 1257
- Barthel Index, 37, 2047
- Bartholin cyst, 1691
- Bartholin glands, 1641, 1677, 1698
- Basal cell carcinoma (BCC), 1852–1855, 1853f
- Basal ganglia, 1969, 1977, 2095–2096
- Basal insulin, 1498, 1500
- Basal metabolic rate, 107, 297, 749, 1451, 1453, 1474
- Baseline body temperature, for older adults, 188
- Basophils, 890, 989, 1039
- Battery-powered pulse generator, 2125–2126
- B cells. *See* B lymphocytes
- BCG Live, 1627
- BE. *See* Barrett esophagus
- Beau lines, 1809
- Beclomethasone, 1483t
- Beclomethasone dipropionate, 617t, 635t
- Bed rest
 in ascites, 1373
 hepatitis A and, 1386–1387
- Behavioral therapy, for urinary incontinence, 1613
- Belatacept, 1598t
- Belimumab, for systemic lupus erythematosus, 1084
- Bell palsy, 2107t, 2108
- Below-knee amputation (BKA), 1195
- Benazepril, for hypertension, 872t
- Beneficence, 25c
- Benign bone tumors, 1145–1146
- Benign, definition of, 303, 304
- Benign paroxysmal positional vertigo, 1954–1957
- Benign proliferative breast disease, 1719
 atypical hyperplasia, 1719
 lobular carcinoma in situ, 1719
- Benign prostatic hyperplasia (BPH), 1540, 1541t, 1753–1755. *See also* Prostate surgery
 assessment and diagnostic findings, 1754
 clinical manifestations, 1754
 medical management, 1754–1755
 minimally invasive therapy, 1755
 pathophysiology, 1753–1754
 pharmacologic treatment, 1754
 surgical resection of prostate gland, 1755
- Benign skin tumors
 actinic keratoses, 1851–1852
 angiomas, 1852
 cysts, 1851
 dermatofibroma, 1852
 keloids, 1852
 moles, 1852
 seborrheic keratoses, 1851–1852
 Von Recklinghausen disease, 1852
 warts, 1852
- Benson relaxation response, 65, 111, 112, 112c
- Benzodiazepines, 214, 281, 1381, 1382, 1733, 1884, 2017
 for alcohol withdrawal syndrome, 2210
- Benzphetamine, for obesity, 1350t



- Bereavement
definition of, 384, 385
loss and, 385
- Beta-adrenergic blockers, 2095
- Beta₂-agonists, 616
long-acting, 616
short-acting, 616
- Beta-blockers
for heart failure, 799t, 800
for hypertension, 880
for hyperthyroidism, 1464t, 1465
for pheochromocytoma, 1476
for variceal bleeding, 1377
- Beta cells, 1447
- Beta-human chorionic gonadotropin (beta-hCG), 1771
- Betamethasone, 1483t
- Beta-2 microglobulin, 975
- Betaxolol, for hypertension, 873t
- Bethanechol
for gastroesophageal reflux disease (GERD), 1258t
for neurogenic bladder, 1617
- Bicarbonate deficit, 1556t
- Bicarbonate excess, 1556t
- Biceps reflex, 1982
- Bilateral pelvic lymphadenectomy, for cervical cancer, 1696c
- Bile, 1365
formation, 1366
- Bile acid sequestrants, 731t
- Bile reflux
bariatric surgery and, 1359
gastric surgery and, 1281
- Bilevel positive airway pressure (BiPAP), 511
- Biliary cirrhosis, 1399. *See also* Cirrhosis
- Biliary colic, gallstone and, 1420
- Biliary disorders, 1416–1443
- Biliopancreatic diversion with duodenal switch, 1354
- Bilirubin, 1366
excretion of, 1366
- Billroth I procedure, 1274t, 1278–1279
- Billroth II procedure, 1275t, 1278–1279
- Bimanual palpation, 1651
- Binocular vision, 1917, 1924
- Bioavailability, 1367
- Biochemical assessment, 88
- Biochemical mediators, 281, 290, 329
- Biofeedback, 111, 1289, 1292
- Biologic response modifier (BRM). *See also* Immunomodulators
monoclonal antibodies, 330–331
nonspecific, 329–330
- Biologic therapies
for inflammatory bowel disease, 1305
for psoriasis, 1821
- Biomarkers, cardiac, 672
- Bioprostheses, 774
- Biopsy
bone, 1111
liver, 1369
lung, 492
skin, 1813
types of
core needle aspiration, 313
excisional, 313
fine-needle aspiration, 313
incisional, 313
needle, 313
sentinel lymph node, 313
- Biot's respiration patterns, 477, 479t
- Birds, reservoir for virus, 2174
- Bisacodyl, 1290t
- Bismuth subsalicylate, for gastritis, 1269t
- Bisoprolol
for heart failure, 800t
for hypertension, 873t
- Bisphosphonates, in Paget disease, 1141
- Bites
animal, 2200
mosquito, 2200–2202
spiders, 2202
tick, 2202
- Black widow spider bites, 2202
- Bladder cancer, 1626–1627
assessment and diagnostic findings, 1626–1627
clinical manifestations, 1626
pharmacologic therapy, 1627
radiation therapy, 1627
risk factors, 1626c
surgical management, 1627
- Bladder compliance, 1540
- Bladder distention, 454, 671–672
- Bladder emptying, 1540
- Bladder retraining, 1614c
- Bladder training, 1998, 2084
- Bladder trauma, 1625–1626
- Bladder ultrasonography, 1545, 1549
- Blast cells, 889
- Blast injury, explosive devices, types of, 2057
- Bleeding, after liver transplantation, 1409–1410
- Bleeding disorders, 930
clinical manifestations, 931, 931f
medical management, 931
nursing management, 931–932
risk factors, 931c
- Bleomycin, 321t, 324
- Blindness, 1903
- Blistering diseases, 1846–1847
bullous pemphigoid, 1846
care of patient with, 1847–1848
dermatitis herpetiformis, 1847
pemphigus vulgaris, 1846
Stevens-Johnson syndrome, 1848–1851
toxic epidermal necrolysis, 1848–1851
- Blood, 885–890
cells, 887–890
erythrocytes (red blood cells), 887
leukocytes (white blood cells), 889–890
platelets (thrombocytes), 890
exposure to, 432
function of, 889–890
plasma and plasma proteins, 890
- Blood-brain barrier (BBR), 332, 424, 1050, 1393, 1971, 2012, 2089–2091, 2093, 2095, 2117
- Blood donation, 897–898
autologous donation, 898
blood processing after, 899
complications of, 899
directed donations, 898
hemodilution, 898–899
intraoperative blood salvage, 898
standard donation, 898
- Blood flow, 820
- Blood gas
analysis, 264
assessment of, 265c
measurements, 607
- Blood glucose monitoring, 1480
- Blood pressure
autoregulation of, 1539
intra-arterial monitoring, 684, 686–687
measurement of, 870
postural changes, 664
systemic arterial, 665
- Blood transfusion. *See* Transfusion
- Blood urea nitrogen (BUN)
hypovolemia and, 233
laboratory testing, 230
reference range, 673t
- Blunt trauma, 1625, 2193
assessment, 590
diagnostic findings, 590
medical management, 590
pathophysiology, 589–590
- B lymphocytes, 885, 889, 930, 958, 992
role of, 1039
- BMI. *See* Body mass index
- BNP. *See* Brain natriuretic peptide
- Body fluids
amount of, 225–226
composition of, 225–226
exposure to, 423–424
gains and losses, routes of, 228–229, 228t
regulation of, 226–227
status of, evaluation of, 229–230
- Body mass index (BMI), 65, 71, 81, 86–88, 158, 177, 319, 400, 518, 696, 730, 1080, 1089, 1134, 1311, 1345, 1347t
calculation of, 86t
definition of, 71
nutritional assessment and, 85–86
- Body temperature, maintenance of, 762
- Boerhaave syndrome, 1255, 1256
- Bolus feedings, 1245, 1247, 1885
- Bone-anchored hearing aid (BAHA), 1960
- Bone densitometry, 1110
- Bone integrity, assessment of, 1106–1107
- Bone marrow, 885–891, 894, 895f
aspiration and biopsy, 894–895, 895f
failure, 916
- Bone mineral density (BMD), 130, 934, 1085
- Bones, 1104
blood supply, 1124
cells, 1098
flat, 1098
formation, 1098
healing, 1099
irregular, 1097
long, 1097, 1097f
maintenance, 1098–1099
periosteum, 1098
resorption, 1098
short, 1097
- Bone scan, 1110
and blood studies, 1114c
- Bone tumors, 1145–1148, 1148c
assessment and diagnostic findings, 1146–1147
benign, 1145–1146
clinical manifestations, 1146
malignant, 1146
medical management, 1147
metastatic, 1146
nursing management, 1147–1148
pathophysiology, 1146
- Borderline tumors, 1701
- Bortezomib, 977
- Botulinum toxin injections
in achalasia, 1254
in anal fissures, 1334–1335



- Bowel function, promotion of, 454
 Bowel habits, change in, 1214
 Bowel preparation, preoperative, 398
 Bowel training programs, 1292
 Bowman capsule, 1536
 Boxer's fracture, 1181
 BPH. *See* Benign prostatic hyperplasia
 Braces, 1123, 1167–1168
 home care checklist, 1170c
 immobilized lower extremity, 1171
 immobilized upper extremity, 1170–1171
 nursing management of patient, 1171
 Brachial plexus block, 429
 Brachioradialis reflex, 1983
 Brachytherapy, 1697
 for breast cancer, 1731
 for cervical cancer, 1697
 definition of, 317–318
 delivery of, 317
 high-dose radiation, 317
 interstitial implants, 317
 low-dose radiation, 317
 for prostate cancer, 1756, 1760
 for vaginal cancers, 1700
 Bracketing, 12
 Bradykinesia, 2123
 Bradykinin, 1041
 Bradypnea patterns, 479t
 Brain
 abscesses, 2091–2092
 anatomy of, 1994, 2033
 arterial blood supply, 1970
 circulation, 1970–1971
 protection of, 1969
 Brain death
 definition of, 1977
 description, 1977
 Brain Injury Association of America, 2066
 Brain natriuretic peptide (BNP), 232, 572, 921
 Brain stem, 1957
 Brainstem auditory evoked responses (BAERs), 1990
 Brain tumors, 2113
 classification of, 2113c
 sites, 2115f
 Branch retinal vein occlusion (BRVO), 1922
 Bravo pH monitoring system, 1225
 BRCA1 and BRCA2, 1720
 Breakthrough pain (BTP), 198
 Breast
 anatomy of, 1709, 1710f
 assessment, 1709–1712
 health history, 1709
 physical assessment, 1709–1712
 diagnostic evaluation, 1712
 breast self-examination, 1712–1713, 1714c
 contrast mammography, 1713
 magnetic resonance imaging, 1715
 mammography, 1713, 1715f
 ultrasonography, 1713–1715
 female breast examination, 1709–1712
 abnormal breast findings on inspection, 1710, 1711c
 inspection, 1710
 palpation, 1710–1712
 lymphatic drainage of, 1722f
 male breast examination, 1712–1713
 obesity on, effect of, 1712
 percutaneous biopsy, 1715, 1715t
 core needle biopsy, 1716
 fine-needle aspiration, 1716
 MRI-guided core biopsy, 1716
 stereotactic core biopsy, 1716
 ultrasound-guided core biopsy, 1716
 prosthesis, 1737
 reconstruction, 1735–1736
 latissimus dorsi flap, 1736f
 nipple–areola reconstruction, 1737
 with tissue expander, 1735, 1736f
 transverse rectus abdominal myocutaneous (TRAM) flap, 1736, 1736f
 surgical biopsy, 1716
 excisional biopsy, 1716
 incisional biopsy, 1716
 nursing management, 1718
 wire needle localization, 1716
 tail of Spence, 1709, 1710f
 Tanner stages of development, 1709
 Breast cancer, 122, 125, 129t, 1719
 adjuvant chemotherapy for, 1731–1732
 chemotherapy regimens, 1732
 dose-dense chemotherapy, 1732
 hematopoietic growth factors, self-administration of, 1733c
 indications for, 1732t
 nursing management, 1732, 1732t
 side effects of, 1732
 assessment and diagnostic findings, 1722
 clinical manifestations, 1722
 ductal carcinoma in situ, 1719
 genetic testing, implications of, 1737
 hormonal therapy for, 1733–1734
 incidence of, 1719
 invasive cancer, 1720
 infiltrating ductal carcinoma, 1720
 infiltrating lobular carcinoma, 1720
 inflammatory carcinoma, 1720
 medullary carcinoma, 1720
 mucinous carcinoma, 1720
 Paget disease, 1720
 tubular ductal carcinoma, 1720
 in men, 1739
 nursing process, 1723–1725
 assessment, 1725
 body image, positive, 1726
 diagnosis, 1725
 evaluation, 1730
 hematoma formation and, 1727–1728
 infection and, 1728
 lymphedema and, 1726–1727
 pain management, 1725–1726
 patient preparation, 1725
 planning and goals, 1725
 positive adjustment and coping, 1726
 postoperative nursing interventions, 1726–1730
 postoperative sensations and, 1726
 preoperative nursing interventions, 1725
 sexual function, improving, 1728
 in older women, 1738
 patient education
 drainage management at home, 1728c
 exercise after breast surgery, 1729c
 home care checklist, 1728c
 pregnancy and, 1727–1738
 prevention strategies, 1721
 chemoprevention, 1721
 long-term surveillance, 1721
 prophylactic mastectomy, 1722
 prognosis, 1722–1723, 1723c
 protective factors, 1720
 quality of life and survivorship, 1738
 radiation therapy for, 1730–1731
 breast-conservation treatment and, 1731c
 nursing management, 1731
 side effects of, 1731
 reconstructive surgery after mastectomy, 1737
 recurrent and metastatic, treatment of, 1735
 risk factors for, 1720, 1721t
 staging, 1722
 surgical management, 1723, 1723t
 breast conservation treatment, 1723
 modified radical mastectomy, 1723
 sentinel lymph node biopsy, 1723
 total mastectomy, 1723
 targeted therapies for, 1734
 women with disability and, 1738–1739
 Breast conservation treatment, 1723
 Breast disorders
 benign proliferative breast disease, 1719
 atypical hyperplasia, 1719
 lobular carcinoma in situ, 1719
 breast masses, 1718t
 breast pain, 1718
 cancer of breast, 1719–1739 (*See also* Breast cancer)
 cystosarcoma phyllodes, 1719
 cysts, 1718
 fat necrosis, 1719
 fibroadenomas, 1718t, 1719
 fissure, 1717
 intraductal papilloma, 1719
 lactational abscess, 1717–1718
 mastitis, 1717
 nipple discharge, 1717
 superficial thrombophlebitis of breast, 1719
 Breast reconstruction surgery. *See* Mammoplasty
 Breast self-examination (BSE), 1712–1713, 1714c
 Breathing
 airway patency and, 1872
 assessment of, 470–483
 ataxic, 479t
 deep, 418
 diaphragmatic, 409c
 exercises, 645
 patterns, 477
 retraining, 616
 Breath sounds, 482, 482t
 Breath tests, 1217
 Brentuximab vedotin, 974
 Bristol Stool Form Scale (BSFS), 1294f
 Bromocriptine, 1667c
 Bronchi, 472
 Bronchiectasis, 631
 assessment/diagnostic findings, 631
 clinical manifestations, 631
 cystic fibrosis (CF), 603
 medical management, 631
 nursing management, 643
 pathophysiology, 631
 Bronchioles, 465
 Bronchitis, 484t
 Bronchoconstriction, 565, 1872
 Bronchodilators, 607, 614
 Bronchophony, 482
 Bronchoplastic resection, 581c
 Bronchopulmonary infections, 621c, 629
 Bronchoscopic lung volume reduction therapies, 618
 Bronchoscopy



- complications of, 491
definition of, 490
endoscopic, 490, 490f
nursing interventions, 490
procedure, 490–491
- Bronchospasm, airway clearance, 614
- Brown recluse spider bites, 2202
- Brudzinski sign, 2089
- Bruit, 820
- Brush biopsy, 1552
- Brushing, teeth, 1232
- BRVO. *See* Branch retinal vein occlusion
- BSE. *See* Breast self-examination
- BSFS. *See* Bristol Stool Form Scale
- B-type natriuretic peptide (BNP), 795
- Buck's extension traction, 1174–1175, 1174f
- Budd–Chiari syndrome, 1380
- Budesonide, 500t, 617t, 635t, 637t
- Bulbar paralysis, 2105, 2107t
- Bullae, 1835, 1846
- Bullectomy, 618
- Bullous impetigo, 1835
- Bullous pemphigoid, 1846–1847
- Bumetanide, for hypertension, 873t
- BUN. *See* Blood urea nitrogen
- Bundle of His, 691, 692f
- Bundles, of care, 9
- Bupivacaine, 207, 217, 429t
- Bupropion, 181, 608
- Buried bumper syndrome, 1251
- Burn care, 1873t
- Burn centers, 1868c
- Burns
acute/intermediate phase, 1876
age, 1867
complications, 1888t
depth of, 1867–1868
electrical, 1870c
extent of, 1868–1869
first-degree, 1867–1868
fourth-degree, 1868, 1868f
home care checklist, 1891c
incidence, 1865–1866
infection prevention, 1876
management of, 1865–1892
memories of pain after, 1884
ocular, 1908
outpatient care, 1891
overview, 1865–1873
pain management, 1883–1884
pathophysiology, 1869–1873
prevention of, 1866–1867, 1866c
rehabilitation, 1887
second-degree, 1867–1868
severity, 1867–1869
shock and, 1870
supporting patient and family processes, 1886
survival and recovery, outlook for, 1867
third-degree, 1868, 1868f
topical antibacterial therapy for, 1880
wound cleaning, 1880
wound dressing, 1880–1881
- Bursa, 1100
- Bursitis, 1117
- Busulfan, 321t, 324
- Butane honey oil (BHO), 2205
- C**
- CAGE (Cutting down, Annoyance by criticism, Guilty feeling, and Eye-openers), 80
- Calcitonin, 1453
- Calcium alginates, 1818
- Calcium channel blockers, 734–735, 844
for hypertension, 871–872t
- Calcium channel blocking anticonvulsants, 201
- Calcium imbalances, 247–251, 248t
hypercalcemia, 250–251
hypocalcemia, 248–250
- Calcium level
calculating corrected serum, 249c
in kidney disease, 1570–1571
normal adult total serum, 247–248
normal ionized, 248
- Calcium stones, 1622
- Calculous cholecystitis, 1418
- Calicivirus, 2165
- Call for Action—Nurses Lead and Transform
Palliative Care, 369
- Callus, 1120
- Caloric distribution
carbohydrates, 1494
fats, 1494
fiber, 1494
protein, 1494
- Caloric requirements, in diabetes, 1494
- Campylobacter infections, 2165
- Canavan disease, 133
- Cancellous bone, 1097
- Cancer
alopecia and, 318, 349
assessment of neutropenic fever in patients, 356t
bacteria and, 304
benign (noncancerous) and malignant (cancerous) cells, 303–303t
biopsy methods
excisional, 313
fine-needle aspiration (FNA), 313
incisional, 313
needle, 313
sentinel lymph node biopsy (SLNB), 313
of bladder, 1626–1627
body image, improvement of, 354
breast, 354c, 1720–1739
clinical manifestations, 1722
diagnosis, 1722
genetic testing, 1737
male, 1740
nursing management, 1723–1725, 1731–1733, 1735
pregnancy and, 1737–1738
prevention strategies, 1721–1722
prognosis, 1722–1723, 1723c
radiation therapy, 1730–1731
staging, 1722
surgery, 1723, 1725–1730
systemic treatments, 1731–1735
types, 1719–1720
care in oncologic emergencies, 360–363, 360t–362t
care trajectory, 302f
of cervix
assessment and diagnostic findings, 1696
clinical manifestations, 1695–1696
medical management, 1696–1697
chemotherapy, 319–326
chimeric antigen receptor (CAR) T-cell therapy, 332
complementary approaches to, 335
complications in
infection, 355–357
septic shock, 357
thrombocytopenia, 357
COVID-19 considerations, 335–336, 2227
degree of anaplasia, 303–304
diagnostic evaluation, 309–312, 310t–311t
DNA viruses and, 304
epidemiology of, 302–303
of esophagus
assessment and diagnostic findings, 1261
clinical manifestations, 1260–1261
medical management, 1261
nursing management, 1261–1263
pathophysiology, 1260
of fallopian tubes, 1700
fatigue in, 352–352c
gastric, 1277–1283
assessment and diagnostic findings, 1278
chemotherapy, 1279
clinical manifestations, 1278
complications in, 1279
gerontologic considerations, 1280
home care checklist, 1282
medical management, 1278–1280
nursing process, 1280–1283
pathophysiology, 1278
prognosis for patients with, 1278
radiation therapy, 1279–1280
risk factors, 1278
surgical management, 1278–1279
targeted therapies, 1279
uncertainty and care needs in, 1282c
genetic mutations, 303
genetics concepts and oncologic disorders, 305c
grief, assistance during, 354–355
health disparities, 303
hematopoietic stem cell transplantation for, 326–329
allogenic, 326–327
autologous, 328
care after treatment, 329
nursing management, 328–329
immune system and, 307–308
immunotherapy, 329–332, 996
incidence and death rates, 303
integrative health care, 335
of larynx, 514
assessment and diagnostic findings, 515
classification, 515
clinical manifestations, 515
goals of treatment, 515
medical management, 515–517
prognosis, 515
radiation therapy, 517
risk factors, 514c
speech therapy, 517
surgical management, 515–517
of liver
liver metastases, 1405–1407
primary liver tumors, 1404–1405
lung
assessment and diagnostic findings, 579–580
chemotherapy, 587
classification and staging, 577–578
clinical manifestations, 579
complications, 587–588
immunotherapy, 587
medical management, 580
nursing management, 580–585, 588



- Cancer (*continued*)
- palliative care, 587
 - pathophysiology, 577
 - radiation therapy, 585
 - risk factors, 578–579
 - surgical management, 580
 - nursing care of patients, 337c–350c
 - nutrition and physical activity for
 - prevention of, 309c
 - nutrition management, 350–351
 - of oral cavity and pharynx
 - assessment and diagnostic findings, 1236
 - clinical manifestations, 1235
 - HPV vaccine, 1236
 - medical management, 1236
 - nursing management, 1236
 - pathophysiology, 1235
 - of ovary, 1700–1702
 - assessment and diagnostic findings, 1701
 - clinical manifestations, 1701
 - epidemiology, 1700–1701
 - medical management, 1701–1702
 - nursing management, 1702
 - pathophysiology, 1701
 - pharmacologic therapy, 1701–1702
 - stages, 1701c
 - pain in, 351–352, 352t
 - of pancreas, 1438–1440
 - assessment and diagnostic findings, 1439
 - clinical manifestations, 1439
 - medical management, 1439–1440
 - nursing management, 1440
 - pathophysiology of, 303–308
 - of penis, 1775–1776
 - preparing patients for self-care, 357–358c
 - prevalence in older adults, 358–359, 359t
 - primary prevention, 308
 - of prostate
 - clinical manifestations, 1755
 - diagnosis, 1755–1756
 - medical management, 1756–1769
 - psychosocial distress management, 355
 - radiation therapy, 315–319
 - brachytherapy, 317–318
 - dosage, 316–317
 - external, 317
 - GammaKnife™, 317
 - high-dose radiation (HDR), 317–318
 - image-guided (IGRT), 317
 - intensity-modulated (IMRT), 317
 - internal, 317–318
 - ionizing, 316
 - low-dose radiation (LDR), 317–318
 - nursing management, 318–319
 - protecting caregivers, 319
 - proton therapy, 317
 - systemic, 318
 - systemic side effects, 318
 - toxicity associated with, 318
 - renal, 1562–1564
 - risk evaluation, 308
 - role of genetics in, 308
 - secondary prevention, 308
 - sexuality-based issues, 354
 - skin, 1853c
 - skin lesions in, 350
 - suppressor T lymphocytes, overexpression of, 308
 - surgical management, 312–315
 - mastectomy, 314
 - nursing management, 315
 - palliative, 314–315, 315t
 - prophylactic or risk reduction, 314
 - reconstructive, 315
 - salvage, 313–314
 - survivorship, 359–360, 359t
 - targeted therapies, 332–335
 - tertiary prevention, 309
 - testicular, 1771–1774
 - thyroid, 1467–1470
 - tissue integrity, maintaining, 336–350
 - by tissue of origin, 306t
 - TNM classification system, 312c
 - tumor-associated antigens (TAAs) and, 308
 - tumor staging and grading, 309–312
 - of uterus (endometrium), 1697–1698
 - of vagina, 1700
 - of vulva, 1698–1700
 - clinical manifestations, 1698
 - home, community-based, and transitional care, 1699–1700
 - medical management, 1698
 - nursing management, 1698–1700
 - postoperative care, 1698–1699
- Cancer-related anorexia-cachexia syndrome (CACS), 350–351
- Candida auris*, 2155
- Candida* (yeast) infection, 328
- Candidiasis, 1022, 1230t, 1678t
 - clinical manifestations, 1677–1678
 - medical management, 1678
- Cannabidiol (CBD), 80
- Cannulated screw fixation, 1185f
- Capillaries, 819
- Capillary filtration and reabsorption, 820
- Capsule colonoscopy, 1223
- Carbon dioxide transport, 470
- Carbonic acid deficit, 263
- Carbonic acid excess, 262–263
- Carbon monoxide poisoning, 2203–2204
- Carboplatin, 1701
- Carboxyhemoglobin, 1872
- Carbuncles, 1836
- Carcinogenesis
 - chemical agents, 305–306
 - etiology, 304–307
 - genetics/familial factors and, 306–307
 - hormonal agents, 307
 - life style factors, 307
 - molecular process, 304
 - during progression, 304
 - during promotion, 304
 - physical factors, 304–305
- Carcinogens, 304
- Cardiac action potential, 654
- Cardiac arrest, 1047
 - clinical manifestations, 813
- Cardiac autonomic nervous systems (CANS), 699
- Cardiac biomarker analysis, 672
- Cardiac catheterization, 681–683
 - left heart, 681–682
 - nursing responsibilities, 682–683
 - right heart, 681
 - self-management, 683c
- Cardiac conduction system, 653
- Cardiac cycle, 655
- Cardiac electrophysiology, 653–655
- Cardiac hemodynamics, 655–656
- Cardiac implantable electronic devices, 676
- Cardiac muscle cells, 777
- Cardiac output, 275, 759–760
 - heart rate, effect of, 655
 - stroke volume, effect of, 655–656
- Cardiac rehabilitation, 741
- Cardiac resynchronization therapy (CRT), 778, 804
- Cardiac rhythm therapies, 702
- Cardiac sphincter, 1252
- Cardiac stress testing, 677–678
- Cardiac surgery, 751t–752t
 - care of patient after, 755–758
 - home care checklist, 763c
 - intraoperative management, 753
 - nursing care, 755c–758c
 - patient assessment, 754, 759
 - postoperative care, 753–763
 - adequate gas exchange, ensuring, 760
 - cardiac output, ensuring, 760
 - fluid and electrolyte balance, promotion, 760
 - monitoring of complications, 759–760
 - pain control, 761
 - risk of delirium, 760–761c
 - self-care management, 762–763
 - tissue perfusion, maintenance, 761–762
- Cardiac tamponade, 597, 811–812
- Cardiogenic shock, 811
 - antiarrhythmic medications for, 289
 - assessment and diagnostic findings, 288
 - clinical manifestations, 287
 - diuretics for, 289
 - dobutamine therapy, 288
 - dopamine therapy, 289
 - fluid administration in, 288, 290
 - hemodynamic monitoring in, 288, 290
 - intra-aortic balloon counterpulsation in, maintaining, 289f, 290
 - IV nitroglycerin therapy, 289
 - mechanical assistive devices in, 289
 - medical management, 288
 - nursing management, 289–290
 - oxygenation in, 288
 - pain control, 288
 - pathophysiology, 287–287f
 - safety and comfort in, 290
 - vasoactive agents for, 289
 - vasoactive medication therapy, 288
- Cardiomyopathy
 - arrhythmogenic right ventricular
 - cardiomyopathy/dysplasia, 778
 - assessment and diagnostic findings, 778
 - congestive heart failure, 777f
 - dilated, 776
 - home care checklist, 784
 - hypertrophic, 776–777
 - medical management, 778
 - nursing process, 782–784
 - pathophysiology, 775–778
 - restrictive, 777–778
 - surgical management, 778–782
 - heart transplantation, 779–780, 779f
 - left ventricular outflow tract surgery, 779
 - total artificial hearts, 782
 - unclassified, 778
 - ventricular assist devices, 780–781
- Cardiopulmonary bypass (CPB) system, 289, 749–750, 762
- Cardiopulmonary resuscitation (CPR), 297, 813, 1047



- follow-up monitoring and care, 815
- medications used, 814t
- Cardiovascular alterations, in burn injury, 1870–1871
- Cardiovascular disorders, 661c
- Cardiovascular effects of shock, 279
- Cardiovascular status, in surgical intervention, 404–405
- Cardiovascular system
 - assessment
 - health history, 657–664
 - physical, 664–672
 - diagnostic studies of conditions
 - cardiac catheterization, 681–683
 - cardiac stress testing, 677–678
 - chest x-ray, 674
 - CT scanning, 679
 - echocardiography, 680–681
 - electrocardiography, 674–677
 - electrophysiology study (EPS), 683
 - fluoroscopy, 674
 - hemodynamic monitoring, 683–688
 - laboratory tests, 672–674
 - Magnetic resonance angiography, 679–680
 - radionuclide imaging, 678–679
- Cardioversion, 712–713, 713c
- electrical, 713–714
- Carpal tunnel syndrome, 1118
- Carriers, 123
 - testing, 127t
- Cartilage, 1097
- Cartilaginous rings, 464
- Cascade screening, 126, 130
- Case management, 35
- Case managers, 35, 53
- Casts, 1166
 - fiberglass, 1166–1167
 - hip spica, 1166
 - long arm, 1166
 - long leg, 1166
 - plaster, 1167
 - short arm, 1166
 - short leg, 1166
 - shoulder spica, 1166
 - walking, 1166
- Cataracts
 - assessment and diagnostic findings, 1915
 - clinical manifestations, 1915
 - medical management, 1915–1917
 - nursing management, 1917–1918
 - pathophysiology, 1914
 - risk factors, 1915c
- Catecholamines, 100
- Catheter ablation therapy, 702
- Catheter-associated urinary tract infections (CAUTI), 414, 1605–1606, 1618
- Catheterization, 1617
- Ceiling effect, 211
- Celiac disease
 - assessment and diagnostic findings, 1296
 - clinical manifestations, 1296
 - medical management, 1297
 - nursing management, 1297
 - pathophysiology, 1295–1296
- Cell cycle, 316f, 319
- Cell cycle-specific agents, 319
- Cell division, 120
- Cellular adaptation, 105–106
- Cellular effects of shock, 274–275f
- Cellular healing, 109
- Cellular immune response, 993
- Cellular injury, 106–108
- Cellular response to injury, 108–109
- Cellulitis
 - clinical manifestations, 861
 - medical management, 861
 - nursing management, 861–862
 - pathophysiology, 861
- Centers for Disease Control and Prevention (CDC), 79, 159
- Centers for Medicare and Medicaid Services (CMS), 399
- Center to Advance Palliative Care (CAPC), 371
- Central retinal artery occlusion, 1922
- Central cord syndrome, 2071c
- Central cyanosis, 529
- Central line-associated bloodstream infections (CLABSI), 283–284c, 414, 1315, 2155
- Central retinal vein occlusions (CRVOs), 1921–1922
- Central sensitization, 202
- Central venous access devices (CVADs), 1314
- Central venous pressure (CVP), 278, 283
- Cerebellum, 1969
- Cerebral angiography, 1987–1988
- Cerebral circulation, 1970
- Cerebral hypoxia, 2049
- Cerebral metastases, 2118
- Cerebrospinal fluid (CSF), 1970, 2004
- Cerebrum, 1968–1969
- Certified registered nurse anesthetist (CRNA), 399, 417, 420, 430, 438–439
- Certolizumab, 1308
- Cerumen impaction, 1946–1947
- Cervical biopsy, 1653
- Cervical cap, 1662
- Cervical palpation, 1651
- Cervicitis, 1678t
- Cetirizine, 500
- Chancre, 1230t
- Cheilitis, 1834
- Chelation therapy, 964–965
- Chemical agents, 107
- Chemical burns, 2204
 - of esophagus, 1256–1257
- Chemical mediators, 1040
 - bradykinin, 1041
 - eosinophil chemotactic factor of anaphylaxis, 1041
 - histamine, 1040–1040t
 - of hypersensitivity, 1040t
 - leukotrienes, 1041
 - platelet-activating factor, 1041
 - prostaglandins, 1041
 - serotonin, 1041
- Chemical weapons, 2234–2237
- Chemoradiation (CRT), 1236
- Chemoreceptors, 275
- Chemotherapy, 319–326, 2117
 - administration of
 - dosage, 320
 - extravasation range, 320
 - hypersensitivity reactions (HSRs), 320–322
 - for AIDS-related peripheral or systemic lymphoma, 1025
 - antineoplastic agents, 321t
 - for bladder cancer, 1627
 - for breast cancer, 1731–1732, 1732t
 - chemotherapeutic agents, 319–320
 - cognitive changes, management of, 326
 - fatigue, management of, 326
 - gastric cancer, 1279
 - for KS, 1025
 - liver cancer, 1405–1406
 - for lung cancer, 587
 - for multiple myeloma, 978t
 - nursing management, 325–326
 - for ovarian cancer, 1701
 - protecting caregivers, 326
 - safety of healthcare providers, 327c
 - toxicity associated with
 - cardiopulmonary system, 323–324
 - cognitive impairment, 324
 - fatigue, 324
 - gastrointestinal system, 322–323
 - hematopoietic system, 323
 - neurologic system, 324
 - renal system, 323
 - reproductive system, 324
- Chenodeoxycholic acid (chenodiol or CDCA), 1422
- Chest
 - auscultation, 483
 - configuration, 477
 - pain, 473, 477, 658
 - assessment, 659t–660t
 - percussion, 626
 - trauma
 - blunt trauma, 589–592
 - cardiac tamponade, 597
 - penetrating trauma, 592–593
 - pneumothorax, 593–597
 - subcutaneous emphysema, 597–598
- tumors
 - lung cancer (bronchogenic carcinoma), 577–588
 - tumors of mediastinum, 588–589
- vibration, 627
- x-rays, 488, 674
- Chest drainage system, 595–597, 596f
 - comparison, 595t
 - dry suction water-seal systems, 597
 - dry suction with a one-way mechanical valve, 597
 - water seal system, 596
- Chest physiotherapy (CPT), 529, 543, 552, 588, 624, 631, 2103
- Chief complaint, 75
- Childhood illnesses, 75
- Chimeric antigen receptor (CAR) T-cell therapy, 332
- Chlamydia, 1684
- Chlamydia pneumoniae, 920
- Chlamydia trachomatis, 2169
- Chlorhexidine, 1172
- Chloride channel activator, 1290t
- Chloride imbalance, 257t
 - hyperchloremia, 258
 - hypochloremia, 257–258
- Cholecystectomy, 1422
- Cholecystitis, 1418
- Cholecystokinin (CCK), 1345
- Cholecystostomy
 - laparoscopic, 1424–1425
 - percutaneous, 1425–1426
 - small-incision, 1425
 - surgical, 1425
- Choledochostomy, 1425



- Cholelithiasis, 1418–1426
 assessment and diagnostic findings, 1420–1420t
 abdominal x-ray, 1421
 cholescintigraphy, 1421
 endoscopic retrograde cholangiopancreatography (ERCP), 1421–1422
 oral cholecystography, 1421
 percutaneous transhepatic cholangiography (PTC), 1422
 radionuclide imaging, 1421
 ultrasonography, 1421
 clinical manifestations
 jaundice, 1420
 pain and biliary colic, 1420
 urine and stool color, changes in, 1420
 vitamin deficiency, 1420
 medical management, 1422
 dissolving gallstones, 1423
 extracorporeal shock wave lithotripsy (ESWL), 1424
 intracorporeal lithotripsy, 1423–1424
 nutritional and supportive therapy, 1422
 pharmacologic therapy, 1422–1423
 stone removal by instrumentation, 1423
 pathophysiology
 cholesterol stones, 1419
 pigment stones, 1419
 risk factors, 1419c
 surgical intervention
 cholecystectomy, 1425
 choledochostomy, 1425
 gerontologic considerations, 1426
 laparoscopic cholecystectomy, 1424–1425
 nursing process, 1426–1428
 percutaneous cholecystostomy, 1425–1426
 preoperative measures, 1424
 small-incision cholecystectomy, 1425
- Cholescintigraphy, 1421
- Cholesterol, 672
- Chordae tendineae, 766
- Chromosomal differences, 124
- Chromosomes, 119
- Chronic bronchitis, 484t, 603–604
- Chronic diseases, 155
 causes of, 157–159
 course of, 160
 deaths, 157–158
 definition, 155, 157
 effect on quality of life, 155–156
 facts about multiple chronic conditions (MCC), 156c
 health care costs, 155, 160
 health disparities and, 156–157
 major behaviors as causes of, 158
 management of, 157
 misconceptions about, 158t
 nonmodifiable factors, 158
 patient education to prevent, 159
 prevalence of, 157–159
 prevention of, 159
 progression of, 160
 psychological and emotional reactions of patients, 157
 risk factors, 159
 therapeutic regimens, 160
- Chronic gastric ulcers, 1271
- Chronic gastritis, 1267
- Chronic glomerulonephritis, 1560–1561
- Chronic illness
 collaborative process management of, 160
 continuing and transitional care, 162–163
 day-to-day management of, 160
 definition, 155
 development of, 160
 ethical issues, 160
 family life and, 160
 implications of managing, 161
 lifestyle factors causing, 158
 living with uncertainty, 161
 nursing care of patients with, 162–163
 psychological and social issues, 159
 self-management of, 160
- Chronic invasive fungal sinusitis, 501
- Chronic kidney disease (CKD), 1555–1556
 assessment and diagnostic findings, 1557
 clinical manifestations, 1557
 medical management, 1557
 in older adults, 1557
 pathophysiology, 1556
 stages of, 1556–1557, 1557c
- Chronic lymphocytic leukemia (CLL)
 clinical manifestations, 958
 medical management, 959
 nursing management, 959
 pathophysiology, 958
 veterans considerations, 957
- Chronic multisymptom illness (CMI), 161
- Chronic myeloid leukemia (CML)
 clinical manifestations, 955
 medical management, 955–956
 nursing management, 956
 risk factors associated with lower adherence to oral therapy for, 956t
- Chronic obstructive pulmonary disease (COPD), 262, 474, 484t, 534, 796, 964, 999
 age difference, 605
 airflow limitation in, 603
 airway clearance, achieving, 619, 624–627
 arterial blood gas measurements in, 607
 assessing patients with, 607c
 assessment and diagnostic findings, 606–607
 breathing retraining, 627–628, 628c
 clinical manifestations, 606
 complications, 608
 deaths from, 603
 exercise tolerance, improving, 628–629
 genetic risk factors, 605
 grades, 607–608t
 home, community-based, or transitional care, 629
 inflammatory and structural changes, 603
 lifestyle modifications, 608, 630
 medical management, 608–619
 exacerbations, 616–617
 nutritional therapy, 618–619
 oxygen therapy, 608–614, 610t–612t, 630c
 palliative care, 619
 pharmacologic agents, 608, 614–616
 pulmonary rehabilitation, 618–619
 risk reduction, 608
 smoking cessation, 608
 surgical management, 617–618
 monitoring and managing potential complications, 629
 nursing management, 619–631, 620c–624c
 pathophysiology, 603–605
 risk factors, 605–606
 self-management, 628–631
 systemic or extrapulmonary manifestations of, 606
- Chronic or persistent pain, 198
- Chronic pancreatitis, 1433–1436
 assessment and diagnostic findings, 1437
 clinical manifestations, 1436–1437
 medical management
 nonsurgical approaches, 1437
 surgical approaches, 1437–1438
- Chronic pelvic pain, 1694
- Chronic pharyngitis
 atrophic, 504
 chronic granular, 504
 clinical manifestations, 504–505
 hypertrophic, 504
 medical management, 505
 nursing management, 505
- Chronic pyelonephritis, 1610–1611
- Chronic respiratory acidosis, 262–263
- Chronic rhinosinusitis
 assessment and diagnostic findings, 501–502
 clinical manifestations of, 501
 complications, 502
 medical management, 502
 nursing management, 502–503
 pathophysiology, 501
 prevalence of, 501
 surgical intervention, 502
- Chronic subdural hematoma (SDH), 2059
- Chronic sialadenitis, 1235
- Chronic strains, 1153
- Chyle leak, 1243
- Chyme, 1210–1211
- Cimetidine, 1269t
- C1 inhibitor (C1INH) deficiency, 1060
- CircAid, 854
- Circulating nurse (or circulator), 419–420
- Circulatory impairment, 1175
- Circulatory insufficiency, in vascular disease, 821
- Circulatory needs of tissues, 819
- Circumcision, 1777
- Cisgender, 1781
- Clarithromycin, 1269t
- Clavicle fractures, 1178–1179
- Cleansing of colon, 1223
- Clinical nurse leader (CNL), 35–36
- Clone, 958
- Clonus, 1108, 1983–1984
- Closed fracture, 1157
- Closed reduction, 1159–1160
- Clostridium difficile* (*C. difficile*) colitis, 1247
- Clostridium difficile* infection, 1308, 2154
- Clotting, 269, 891
- Clotting cascade, 274
- Clubbing of the fingers, 475
- Co-analgesic agents, 216–218
 antidepressant, 217
 for burn injuries, 217
 gabapentin, 217
 gerontologic considerations, 217–218
 ketamine, 217
 lidocaine patch, 216–217
 liposomal formulations, 217
 local anesthetics, 216–217
 membrane stabilizer anticonvulsant medications, 217
 pregabalin, 217
 serotonin and norepinephrine reuptake inhibitors (SNRIs), 217



- Codeine, 214
 Cognitive appraisal, 100
 Cognitive coping strategies, 410
 Cognitive–motivational–relational theory, 100
 Colds and cold sores, 498c
 Cold therapy, 1171
 Cold urticaria, 1060–1061
 Collaborative problems, 16
 Collagen dressings, 1818
 Colloid solutions, 227, 282
 Colon cancer, 125
 Colonic function, 1212
 Colonic transit studies, 1221
 Colonization, 2148
 of GI tract, 1212
 Colonoscopy, 1222–1223
 Colony-stimulating factors, 995
 Colorectal cancer, 1324
 assessment and diagnostic findings, 1326
 clinical manifestations, 1326
 complications, 1326
 gerontologic considerations, 1326
 medical management, 1327–1329
 adjuvant therapy, 1328–1329
 surgery, 1327–1328
 nursing process, 1330–1333
 pathophysiology, 1325–1326
 prevention, 1327
 Colorectal tumors, 125
 Color vision testing, 1902
 Colposcopy, 1653
 CoLyte, 1223
 Coma, 1993
 Comedones, 1834
 Comfort–function goal, 204
 Comminuted fracture, 1157–1158f
 Commissurotomy, 771–772
 Communication techniques, therapeutic, 15t
 genetic and genomic information, 138
 in palliative care, 373–374, 374t
 with people who have disabilities, 148c–149c
 Community, 56
 Community-acquired pneumonia (CAP), 531–532
 causes, 532
 incidence rate, 532
 need for hospitalization, 531
 Community and transitional services, 2184
 Community-based palliative care, 372
 Compensatory processes, 104
 Compensatory stage of shock, 276
 Complementary and alternative medicine, 77–78
 Complement system, 993–994
 Complex genetic conditions, 124
 Complex regional pain syndrome (CRPS), 1165–1166
 Compliance, 466
 Composite dressings, 1818
 Comprehensive Addiction and Recovery Act
 of 2016, 212
 Compression, 1158f
 Compression hip screw, 1185f
 Compression therapy, 853–855
 Computed tomography (CT) scanning, 109,
 488–489, 1109, 1655, 1985–1986
 of abdomen, 825
 of abdominal organs and structures,
 1219–1220
 cardiac, 679
 of chest, 921
 kidney and urinary tract, 1549
 of lymphedematous arm or leg, 825
 multidetector (MDCT), 825
 of rotator cuff tears, 1154
 Concentrated (fluorinated) corticosteroids, 1820
 Concomitant hyperthyroidism, 1247
 Concomitant lactose intolerance, 1247
 Concussion, 2060
 Conduction, 691
 Conduction abnormalities, 708–710, 779
 first-degree AV block, 708–708f
 medical management, 710
 second-degree AV block, 709–709f
 third-degree AV block, 709–710, 710f
 Conductive keratoplasty, 1920
 Cone biopsy, 1653
 Confidentiality, 27–28, 147
 Confidentiality of genetic and genomic
 information, 132
 Confusion Assessment Method (CAM)-ICU,
 281
 Congestive heart failure, 797–798
 Conjunctivitis
 allergic, 1928–1929
 assessment and diagnostic findings, 1927
 bacterial, 1927–1928
 clinical manifestations, 1927
 toxic, 1928–1929
 viral, 1927–1929
 Consolidation, 533
 Constancy, 98
 Constipation, 1178, 1248t
 assessment and diagnostic findings, 1288
 clinical manifestations, 1288
 complications, 1288
 definition, 1287
 gerontologic considerations, 1288–1289
 medical management, 1289
 nursing management, 1289
 pathophysiology, 1287–1288
 Contact dermatitis, 1056–1057, 1230t
 assessment and diagnostic findings,
 1056–1057
 clinical manifestations, 1056
 symptoms of, 1056
 types, testing, and treatment of, 1056t
 Contact layers, 1818
 Continent ileostomy, 1310
 Continuing and transitional care, 48–49
 in Addison's disease, 1478–1479
 of adults with hip fractures, 1186
 after bariatric surgery, 1360
 after cardiac surgery, 763
 after gallbladder surgery, 1428
 after gender reassignment surgery,
 1792–1793
 after ileal conduit surgery, 1630
 after kidney surgery, 1595–1596
 after kidney transplantation, 1600
 after liver transplantation, 1412
 after ostomy surgery, 1324
 after surgery, 444, 458
 after THA, 1133
 after urinary diversion surgery, 1635
 of angina patients, 736–737
 assessment and diagnostic findings,
 1479–1480
 of asthma patients, 641–642
 of bone tumor patient, 1148
 of cancer patients, 358
 chronic illness management, 162–163
 of chronic liver disease patient, 1404
 clinical manifestations, 1479
 of colorectal cancer patient, 1333
 of COPD patients, 631
 corticosteroid therapy, 1484
 of Cushing's syndrome patient, 1481–1482
 detection of metastases, 1564
 of diabetes patients, 1512, 1530
 enteral feedings, 1249
 eye prosthesis, 1932
 of gastric cancer patient, 1283
 of gastritis patient, 1270
 of gastrostomy or jejunostomy patient, 1252
 of HBV patient, 1390
 of hepatic encephalopathy patient, 1383
 home infusion therapies, 269–270
 of hyperthyroidism patients, 1467
 of hypothyroidism patients, 1460–1461
 of kidney disease patient, 1577, 1583
 of liver cancer patient, 1407
 of lung abscess patients, 552
 medical management, 1480
 of multiple myeloma patients, 980–981
 neobladder management, 1632
 of oral cancer patient, 1238
 of pancreatic cancer patients, 1440, 1442
 parenteral nutrition support, 1318
 of patients with chronic esophageal
 conditions, 1259
 of patients with disability, 154–155
 of patient undergoing neck dissection, 1244
 of patient with a cast, 1170
 of patient with anorectal disorders, 1336
 of patient with ascites, 1375
 of patient with spinal cord tumors, 2122
 of peptic ulcer disease patient, 1277
 in peritoneal dialysis, 1589–1590
 in primary glomerular diseases, 1559–1560
 of pulmonary embolism patients, 853
 of rheumatoid arthritis patient, 1082
 from shock and sepsis, 298
 through community resources and referrals,
 53
 in uterine prolapse, 1690–1691
 Continuing care retirement communities
 (CCRCs), 177–178
 Continuous ambulatory peritoneal dialysis
 (CAPD), 1586, 1588, 1591
 Continuous cardiac monitors, 676
 Continuous central venous oximetry
 monitoring, 278
 Continuous cyclic peritoneal dialysis (CCPD),
 1588
 Continuous ECG monitoring, 674–675
 Continuous glucose monitoring (CGM)
 system, 1499–1500
 Continuous passive motion devices (CPMs),
 1134
 Continuous positive airway pressure (CPAP),
 662, 804
 Continuous renal replacement therapy,
 1583–1584
 Continuous venovenous hemodialysis
 (CVVHD), 1584
 Continuous venovenous hemofiltration
 (CVVH), 1584
 Contraception
 abstinence, 1660
 coitus interruptus, 1663
 contraindications, 1658
 emergency, 1663–1664
 fertility awareness-based methods, 1663



- Contraception (*continued*)
 hormonal, 1660–1661
 injectable contraceptives, 1661–1662
 mechanical barriers
 cervical cap, 1662
 diaphragm, 1662
 female condom, 1662
 male condom, 1662–1663
 spermicides, 1662
 nursing management, 1664
 oral contraceptives, 1661
 postcoital IUD insertion, 1664
 sterilization, 1660
 transdermal, 1661
 vaginal, 1661
- Contractility, 656
- Contracture, 1107
- Contracture of fingers and wrist, 1171
- Contrast-induced nephropathy (CIN), 681, 1220
- Contrast mammography, 1713
- Contrast phlebography, 826
- Contrast-sensitivity testing, 1904
- Contusions, 1153
- Coping enhancement, 111
- Coping with stressful event, 100, 103
- Core needle biopsy, 1716
- Corn, 1120
- Corneal dystrophies, 1918
- Corneal surgeries, 1918–1919
- Coronary arteries, 653
- Coronary artery bypass graft (CABG)
 alternative technique, 750
 complications, 750
 major indications for, 748
 nursing management, 750–763
 patient eligibility, 748
 traditional, 749–750
 vein commonly used for, 748
- Coronary artery disease (CAD), 726
 age difference, 732
 clinical manifestations, 727
 gender difference, 732
 pathophysiology, 726
 prevention of
 cessation of tobacco use, 730–731
 controlling cholesterol level, 728–730
 diabetes control, 732
 diet recommendations, 730
 hypertension management, 731–732
 medications, 730
 physical activity, 730
 risk factors, 727–728c
 symptoms and complications, 727
- Coronary artery stent, 746–747
- Coronary atherosclerosis, 726
 development of, 729f
- Coronavirus disease 2019 (COVID-19)
 pandemic, 532, 2151–2152, 2155, 2181, 2183–2184, 2186, 2220–2222, 2224, 2226–2227
 ACE2 cellular surface receptors, 875–876
 Acute kidney injury (AKI) and, 1564–1565
 Acute respiratory distress syndrome (ARDS) in, 573–574
 cancer and, 335–336
 clinical manifestations, 540, 2172
 complications, 542
 contact dermatitis and, 1841–1842
 delivery of enteral nutrition to patients, 1246
 dermatologic manifestations, 1838
 diabetes and, 1489
 diagnosis of, 540
 fatality rates, 542
 hemodialysis (HD) and, 1580
 kidney transplantation and, 1598–1599
 medical management, 540–542, 2172–2173
 nursing management, 2173
 obesity as risk factor, 1352
 palliative and end-of-life care and, 388
 pathophysiology, 2172
 personal protective equipment (PPE), 2153c, 2227–2229, 2228c
 relationship between vitamin D and, 1135
 risk factors, 2172
 stroke and, 2032
 use of ACE inhibitors or ARBs, 875–876
 vaccines for, 2173
 venous thromboembolism (VTE) and, 845
 viral transmission, 540
- Corpus luteum, 1643
- Cortical bone, 1097
- Corticosteroid nasal sprays
 for allergic rhinitis, 1050
- Corticosteroids, 1446
 for allergic rhinitis, 1052
 for anaphylactic reactions, 1047
 for asthma, 639
 for bronchial obstruction, 1484
 for dermatologic disorders, 1484
 dosage, 1484
 in eye infections, 1484
 for inflammatory bowel disease (IBD), 1308
 nursing management of, 1484–1485f
 for polymyositis, 1087
 for septic shock, 1484
 side effects, 1483
 for systemic lupus erythematosus (SLE), 1084
 tapering of dosage, 1484
 therapeutic uses of, 1483–1484
 topical, 1820
- Cosmetic procedures, 1860
- Cough, 471–473, 671
- CPR team, 814
- Crackles, 671
- Cranial nerve disorders, 2106–2110
- Cranial nerves, 1972–1972t
- C-reactive protein, 674, 1710
- C-reactive protein (CRP), 728
- Creams, 1819–1820
- Creatinine, 1539
- Crepitus, 1106, 1159
- CREST syndrome, 1086
- Creutzfeldt–Jakob disease
 assessment and diagnostic findings, 2094
 clinical manifestations, 2094
 medical management, 2094
 nursing management, 2094
 pathophysiology, 2093–2094
- Cricoid cartilage, 464
- Cricothyroidotomy, 2189
- Critical-care nurses, moral distress in, 26c
- Critical-care nursing, 36
- Critical incident stress management (CISM), 2183
- Critical thinkers, 11
- Critical thinking, 10–12
 components of, 11–12
 decision making and, 12
 in nursing process, 12
 rationality and insight, 11
- Crohn's disease, 1309, 1334
 assessment and diagnostic findings, 1307
 clinical manifestations, 1306–1307
 comparison with ulcerative colitis, 1306t
 complications, 1307
 pathophysiology, 1305
- Cruciate ligament injury, 1156
- Crush injuries, 2195
- Crutch gaits, 46c
- Cryosurgery, 1854
- Cryotherapy, 1653
- Cryptococcal meningitis, 1024–1025
- Cryptococcus neoformans, 1024
- Crystallized intelligence, 179
- Crystalloid solutions, 227, 282
- CT pulmonary angiography (CTPA), 489
- C-type natriuretic peptide (CNP), 232
- Cultural assessment, 91–94, 92c
- Cultural diversity, 73
 surgery and, 418–419
- Cultural diversity, in health care and nursing, 7
- Culturally competent care, 73
- Culturally sensitive care, at end-of-life, 382–383, 383c
- Culture
 competence, 73
 deaf, 1941
 definition, 72
 ethnic, 72
 views and beliefs, menstruation, 1656
- Cultures (screening), 488
- Cushing's disease, 1451
- Cushing's syndrome, 1450
 nursing process, 1480–1482
- Cyanosis, 475–476, 1804
- CyberKnife™, 317
- Cyclo-oxygenase (COX), 199, 201
- Cyclosporine, 1308
- Cystic fibrosis (CF), 123
 assessment and diagnostic findings, 644
 chronic respiratory inflammation and infections of, 644
 medical management
 of bacterial infections, 644
 CFTR modulators, 645
 of chronic infections, 644
 nebulized and IV antibiotics, 645
 oral antibiotic therapies, 644
 nonpulmonary manifestations, 644
 nursing management, 645
 pathophysiology, 643–644
 pulmonary manifestations, 644
- Cystic fibrosis transmembrane conductance regulator (CFTR), 643–645
- Cystine stones, 1622
- Cystitis, 1605
- Cystocele, 1687
- Cystography, 1551
- Cystosarcoma phyllodes, 1719
- Cysts
 breast, 1712, 1718
 of skin, 1851
- Cytochrome P450 (CYP) genes, 131
- Cytokine release syndrome (CRS), 322
- Cytokines, 274, 308, 1099
 of innate and adaptive immunity, 994t
 stress reduction and effect on inflammatory, 1001c–1002c
- Cytologic test for cancer (pap smear), 1652–1653
- Cytomegalovirus (CMV), 532, 959, 1021



- Cytomegalovirus retinitis, 1025, 1932–1933
 Cytoinductive therapy, 966
 Cytosine (C), 119–119f
 Cytotoxic hypersensitivity, 1041
 Cytotoxic T cells (killer T cells), 993
- D**
- Dabigatran, 849t, 851
 Dacarbazine, 321t
 Dactinomycin, 321t
 Dalteparin, 661
 Danazol, 927
 Dandruff, 421
 Dantrolene, 2084
 Dapagliflozin, 1506t
 Dapoxetine, 1752
 Dapsone
 for acne vulgaris, 1832
 for dermatitis herpetiformis, 1847
 Daratumumab, 977
 Darbepoetin, 1733
 Darunavir (DRV), 1019t
 Dasatinib, 955
 Daughter cells, 120
 Daunorubicin, 321t, 953
 Dawn phenomenon, 1502
 Deafness, 1944
 Débridement, 856
 autolytic, 856
 biologic, 856
 chemical, 856
 definition of, 856
 description of, 856
 enzymatic, 856
 surgical, 856
 ultrasonic, 856
 Debunking, 313
 Decerebration, 2001
 Decitabine, 963
 Decompression, 1249
 Decongestants, 1050
 Decontamination, 229
 Decortications, 2001
 Deep breathing, 408
 Deep inferior epigastric perforator flap (DIEP), 1737
 Defecography, 1225
 Defibrillation, definition of, 707
 Defibrillator, 712
 Degenerative disorders, 2122–2126
 Degenerative joint disease, 1233. *See also* Osteoarthritis (OA)
 Degradation, 1069
 Dehiscence, definition of, 456
 Dehydration, 681
 Delayed complications, 1164–1165
 Delayed union, 1164
 Delirium, 1985
 Delirium tremens, 2210
 Dementia, 2017
 Demyelination, 2094
 Dengue fever, 2229t
 Denosumab, 1138t
 Dental plaque and caries, 1229
 contributing factors, 1229
 prevention of, 1232
 diet, 1232
 fluoridation, 1232
 mouth care, 1232
 pit and fissure sealants, 1232
 treatment for, 1232
- Dentition, preoperative assessments, 403
 Denture care, 1215c
 Deontologic/formalist theory, 25
 Deoxyribonucleic acid (DNA), 119
 definition of, 119
 structure of, 119f
 Department of Health and Human Service (HHS), 2219
 Department of Homeland Security, 2219
 Depolarization, 654
 Depressed skull fractures, 2056
 Depression, 663
 Dermabrasion, 1860
 Dermagraft, 857
 Dermatitis, definition of, 1819
 Dermatitis herpetiformis, 1296
 Dermatofibroma, 1852
 Dermatologic problems, 1691
 Dermatomyositis, 1086
 Dermatophyte infections, 1813
 Dermatoses, 1821
 Dermis, skin, 1800
 Desaturate, 614
 Desflurane, 425t
 Desipramine, 217
 Desloratadine, 1051t
 Desmopressin, 935
 Desquamation, 1237
 Desquamative inflammatory vaginitis, 1679
 Destination therapy, 804
 Detrusor hyperactivity, 188
 Developmental disabilities, 142
 Dexamethasone, 957
 Dexlansoprazole, for gastroesophageal reflux disease (GERD), 1258t
 Dextrazoxane, 324
 Diabetes, 1488
 clinical manifestations, 1523
 complications of, 1523
 diabetic neuropathy, 1523
 foot and leg problems, 1525–1526
 hyperglycemic hyperosmolar syndrome, 1491, 1516–1519
 long-term, 1519
 macrovascular complications, 1519
 microvascular, 1520
 home, community-based, and transitional care, 1522
 cystic fibrosis (CF)-related, 644
 patient education, 1522
 nutritional therapy, 1494
 caloric distribution, 1494
 caloric requirements, 1494
 dietary concerns, 1496
 food classification systems, 1494–1495
 food exchange system, 1494
 Diabetes Control and Complications Trial Research Group (DCCT), 1492
 Diabetes insipidus (DI)
 assessment and diagnostic findings, 1451
 clinical manifestations, 1451
 medical management, 1452
 nursing management, 1452
 Diabetes patient education programs, 1507
 Diabetes Prevention Program Outcomes Study, 1491
 Diabetic dermopathy, 1812
 Diabetic diarrhea, 1525
 Diabetic ketoacidosis (DKA), 1490–1491
 assessment and diagnostic findings, 1492
 clinical features of, 1483
- and hyperglycemic hyperosmolar syndrome, 1516
 and hypokalemia, 1518
 management of, 1485
 electrolyte balance, 1518
 reversing acidosis, 1516
 Diabetic neuropathy, 1523
 Diabetic osteomyelitis, 1142
 Diabetic retinopathy, 1520
 Diagnosis, in nursing process, 16
 choosing nursing diagnosis, 16
 collaborative problems, 16
 nursing diagnoses, 16
 Diagnostic peritoneal lavage (DPL), 2194
 Dialysate, 1578
 magnesium-free, 254
 Dialysis, 1583
 Dialyzer, 1578
 Diaphragm, 1662
 Diaphragmatic breathing, 409c
 Diaphragmatic excursion, 481
 Diaphysis, 1097
 Diarrhea, 1289
 acute, 1289
 assessment and diagnostic findings, 1291
 chronic, 1289
 clinical manifestations, 1291
 complications, 1291
 exudative, 1291
 infectious, 1291
 malabsorptive, 1291
 medical management, 1291
 nursing management, 1291–1292
 osmotic, 1291
 pathophysiology, 1290–1291
 persistent, 1289
 secretory, 1291
 Diarthrosis joints, 1099–1100
 Diastole, 691
 Diastolic blood pressure (DBP), 731
 Diastolic heart failure, 796. *See also* Heart failure (HF)
 Diazepam (Valium), 426t
 DIC. *See* Disseminated intravascular coagulation
 Diclofenac, 208
 Diclofenac sodium gel, 1080
 Dicloxacillin, 1835
 Dicyclomine, 1295
 Didanosine (ddl), 1018t
 Dietary Approaches to Stop Hypertension (DASH) diet, 871t
 Diethylpropion, for obesity, 1350t
 Diethyltoluamide (DEET), 2093
 Differentiation, stem cells, 885
 Diffuse connective tissue disease, 1078
 Diffuse esophageal spasm (DES), 1253–1254
 Digestion, 1210
 Digestive enzymes and secretions, 1211t
 Digitalis, for heart failure, 800t
 Digital mammography, for breast screening, 1713
 Digital rectal examination (DRE), 1545
 Digoxin, for heart failure, 800t
 Dihydrotestosterone (DHT), 1753
 Dilated cardiomyopathy (DCM), 775
 Dilation and curettage (D&C), 1653
 Diltiazem, for angina, 734t
 Dimenhydrinate, 441t
 Dipeptidyl peptidase-4 (DPP-4) inhibitors, 1505t
 Diphenhydramine, 215



- Diplopia, 1915
 Dipyridamole, 677
 Direct-acting oral anticoagulants, for atrial fibrillation, 701
 Dirty bomb, 2231
 Disability, 141–163
 categories of, 142
 disabling disorders *versus*, 144–145
 federal legislation, 146–149
 models of, 144
 prevalence of, 142
 types of, 142–144
 Disarticulation, 1195
 Disaster Medical Assistance Teams (DMAT), 2219
 Disaster Mortuary Operational Response Teams (DMORT), 2220t
 Disease Activity Score-28, 1079
 Disease, definition of, 97
 Disease-modifying antirheumatic drugs (DMARDs), 1069
 Disease transmission, prevention of, 2094
 Dislocation, 1191
 Dissection, 829
 Disseminated intravascular coagulation (DIC), 280
 Dissolution therapy, for gallstones, 1416
 Distal interphalangeal (DIP) joint, 1123
 Distributive justice, 25
 Distributive shock, 291
 Disuse syndrome, 1169
 Diuresis, 1538
 Diverticular disease, 1300–1302
 Diverticulitis, 1287
 Diverticulosis, 1300
 Diverticulum, 1300
 DKA. *See* Diabetic ketoacidosis
 DMARDs. *See* Disease-modifying antirheumatic drugs
 DNP. *See* D-type natriuretic peptide
 Dobutamine, 678
 Docetaxel, 321t
 Docusate, 1290t
 Dofetilide, for atrial fibrillation, 701
 Dolutegravir (DTG), 1020t
 Dominant genetic disorders, 122f
 Doppler techniques, 680
 Dornase alfa, 645
 Dorsal recumbent position, 434
 Dorsiflexion, 41c
 Dose-dense chemotherapy, 1732
 Double-cuffed tube, 558f
 Double effect, 25
 Douche, 1679
 Doxazosin, 874t
 Doxorubicin, 321t
 Doxycycline, 1334
 Dromotropy, 691
 Dronabinol, 1026
 Drone, 2205
 Droplet precautions, 2151
 Drug abuse, 2205
 Drug-induced hepatitis, 1392
 Drug interactions, surgical issues, 406t
 Drug metabolism, in liver, 1367
 Drug overdose, emergency management in, 2206t–2209t
 Drug use, preoperative assessments, 402
 Dry bites, 2200
 Dry eye, 1926
 Dryness of mouth. *See* Xerostomia
 Dry powder inhaler, 615t
 Dry suction water seal systems, 595t
 d-Tubocurarin, 427t
 D-type natriuretic peptide (DNP), 232
 Dual-energy x-ray absorptiometry (DEXA), 1110
 Dubin–Johnson syndrome, 1372
 Duchenne muscular dystrophy, 2132
 Ductal carcinoma in situ (DCIS), 1719
 Dulaglutide, 1505t
 Duloxetine, 217
 Dumping syndrome, 1358
 Duodenal ulcers, 1225
 Duodenum, 1171
 Duplex ultrasonography, 840
 Dupuytren disease, 1118
 Dutasteride, for benign prostatic hyperplasia (BPH), 1754
 DVT. *See* Deep vein thrombosis
 Dwarfism, 1450
 Dysarthria, 2033
 Dyschezia, 1693
 Dysfunctional uterine bleeding, 1658
 Dyskinesias, 2124
 Guillain-Barré syndrome and, 2103
 Parkinson disease, 2124
 Dyslipidemia, 780
 Dysmenorrhea
 assessment and diagnostic findings, 1657
 management, 1657
 primary, 1657
 secondary, 1657
 Dyspareunia, 1658
 Dyspepsia, 1213
 Dysphagia, 2101
 Dysphonia, 2101
 definition of, 2101
 Dysplasia, 1257
 Dyspnea on exertion (DOE), 796
 Dysuria, 1542
- E**
- Ear
 anatomy, 1936–1937
 function of
 balance and equilibrium, 1938
 hearing, 1938
 sound conduction, 1938
 Eastern equine, 2093
 encephalitis, 2093
 fungal, 2093
 herpes simplex virus, 2092
 La Crosse, 2093
 St. Louis, 2093
 West Nile virus, 2093
 Ebola virus, 2146t
 EBP. *See* Evidence-based practices
 EBRT. *See* External-beam radiation therapy
 Ecchymoses, 1809
 Eccrine sweat glands, 1801
 Echocardiography, 678
 nursing interventions, 680
 procedure, 680
 stress testing, 677
 transesophageal, 680
 transthoracic, 680
 Ecstasy. *See* 3,4-methylenedioxymethamphetamine (MDMA)
 Ectopic pregnancy, 1669–1671
 assessment and diagnostic findings, 1669–1670
 causes of, 1669
 clinical manifestations, 1669
 incidence of, 1669
 nursing process, 1670–1671
 assessment, 1670
 complications management, 1670–1671
 diagnosis, 1670
 evaluation, 1671
 grieving process, supporting, 1670
 nursing interventions, 1670–1671
 pain relief, 1670
 patient education, 1671
 planning and goals, 1670
 pharmacologic therapy, 1670
 risk factors for, 1669
 sites of, 1669f
 surgical management, 1670
 Ectropion, 1901
 Eczema. *See* Contact dermatitis
 Edatrexatefludarabine, 321t
 Edema, 661
 airway, 655
 cirrhosis and, 1407
 and ecchymosis, localized, 1159
 interstitial pulmonary, 693
 liver dysfunction and, 1397
 patient education, 264
 peripheral, 686
 right-sided heart failure, 643
 and total knee arthroplasty, 1155
 Edrophonium chloride, 2101
 Edwards Lifesciences Vigileo monitoring system, 687
 EEG. *See* Electroencephalogram
 Efavirenz (EFV), 1018t
 Effector T cells, 993
 Effluent, 1587
 Effort thrombosis, 846
 Effusion, 1107
 EGFR. *See* Epidermal growth factor receptor
 Egophony, 462
 EHR. *See* Electronic health record
 Ejaculation, disorders of, 1751
 Ejaculatory duct, 1744
 Ejection fraction (EF), 662, 680
 ELAD (extracorporeal liver assist devices), 1393
 Elbow, 1180
 Elder abuse, 166
 Elective replacement indicator (ERI), 715
 Electrical burns, 1869
 Electrical cardioversion, for arrhythmia, 713
 Electrocardiogram (ECG)
 and arrhythmia
 components of, 693
 electrode placement., 693f
 electrophysiology study, 693
 hardwire monitoring, 692
 Holter monitor, 693
 interpretation of, 695
 PP interval, 694
 PR interval, 694
 P wave, 693
 QRS complex, 694
 QT interval, 694
 RR interval, 694
 standard 12-lead, 693
 ST segment, 694
 TP interval, 694
 T wave, 694
 U wave, 694
 Electrocautery, for genital warts, 1681



- Electroconvulsive therapy, 181
 Electrode placement, 675
 Electroencephalography, 2092
 Electrohydraulic lithotripsy, 1624
 Electrolyte balance, 760. *See also* Body fluids
 Electrolyte imbalance, 237
 calcium imbalance, 247–248
 Electrolyte solutions, 235t
 Electron beam CT (EBCT), 679
 Electronic health record (EHR), 72
 Electronic Health Record (EHR) Incentive Program, 8
 Electronic nicotine delivery systems (ENDS), 474
 Electrophysiology study (EPS), 683
 Electrosurgery, 1852
 Elephantiasis, 860
 Elimination, 1247
 Eltrombopag, 906c
 Eluxadoline, 1295
 Elvitegravir (EVG), 1020t
 Embryonic stem cells, 995
 Emergency contraception, 1663
 emergency contraceptive pills, 1663–1664
 nursing management, 1664
 postcoital intrauterine device insertion, 1664
 Emergency department (ED), 2035
 Emergency management, 2073–2074
 Emergency medical services (EMS), 2222
 Emergency Medical Treatment and Active Labor Act (EMTALA), 2180
 Emergency Nurses Association (ENA), 2180
 Emergency nursing and the continuum of care
 community and transitional services, 2184
 discharge planning, 2184
 gerontologic considerations, 2184
 obesity considerations, 2185
 Emergency personnel, caring for, 2183
 Emergency preparedness plan (EOP), 2221–2222
 components of, 2221
 initiating, 2222–2224
 communicating with media and family, 2223–2224, 2224c
 critical incident stress management, 2226–2227
 identifying patients and documenting patient information, 2222
 managing internal problems, 2223
 nurse's role in disaster response plans, 2224–2226
 triage, 2222–2223, 2223t
 Emergency Severity Index (ESI), 2185
 Emergency surgery, 400
 Emerging infectious diseases, 2171–2176
 Emesis, 2213
 EMG. *See* Electromyogram
 EMLA (eutectic mixture or emulsion of local anesthetics), 207
 Emmetropia, 1903
 Empagliflozin, 1506t
 Empathetic listening, 961
 Emphysema, 598
 Empyema, 527
 Emtricitabine (FTC), 1018t
 Enalapril, 800t
 for heart failure, 800t
 for hypertension, 800t
 Encephalitis, arthropod-borne virus, 2093
 Enchondroma, 1146
 Endocardium, 651
 Endocervicitis, 1684
 Endocrine, definition of, 1416
 Endocrine function, preoperative assessments, 405
 Endocrine system, 1446
 Endolymph, 1937
 Endolymphatic hydrops, 1953
 Endolymphatic sac decompression, 1954
 Endometrial ablation, 1654
 Endometrial biopsy, 1653
 Endometrial hyperplasia, 1695
 Endometriosis
 assessment and diagnostic findings, 1693
 clinical manifestations, 1693
 medical management, 1693
 pharmacologic therapy, 1694
 surgical management, 1694
 nursing management, 1694
 pathophysiology, 1693
 risk factors, 1693
 transplantation theory, 1693
 Endometriosis Association, 1694
 Endometrium, 1654
 Endophthalmitis, 1914
 Endoscopic bronchoscopy, 490f
 Endoscopic myotomy, 1253
 Endoscopic retrograde
 cholangiopancreatography (ERCP), 1221
 Endoscopic sclerotherapy, for variceal bleeding, 1378
 Endoscopic thoracoscopy, 491f
 Endoscopic ultrasonography (EUS), 1218
 Endoscopic variceal ligation (EVL), 1378
 Endosteum, 1098
 Endotracheal intubation, 556
 preventing complications, 558c
 during surgery, 420
 Endourologic methods of stone removal, 1622
 Endourology, 1551–1552
 Endovascular grafting, of abdominal aortic aneurysms, 840
 Endovascular therapy, 2036
 End-stage kidney disease (ESKD), 1555
 assessment and diagnostic findings
 acidosis, 1570
 anemia, 1570
 calcium and phosphorus imbalance, 1570–1571
 glomerular filtration rate, 1570
 sodium and water retention, 1570
 cardiovascular disease and, 1557
 clinical manifestations, 1557
 complications of, 1559
 medical management, 1559
 dialysis, 1559
 nutritional therapy, 1569
 pharmacologic therapy, 1571–1572
 nursing management, 1559
 continuing and transitional care, 1559–1560
 patient education, 1559
 in older patients, 1559
 pathophysiology, 1557
 End-stage liver disease (ESLD)
 with cirrhosis, 1395
 and liver transplantation, 1407
 Enflurane, 425t
 Enfuvirtide, 1020t
 Enoxaparin, 661
Entamoeba histolytica, 1412
 Entecavir (ETV), in hepatitis B, 1389
 Enteral feedings, in acute pancreatitis, 1431
 Enteral nutrition, 1431
 Enteric, 1244
 Enterocoele, 1687
 Enteroclysis, 1219
 Enterocutaneous fistula, 1307
 Enterohepatic circulation, 1366
 Enteroviruses, 2089
 Entropion, 1901
 Enucleation, 1925
 Enuresis, 1543t
 Envenomation, 2200
 Environmental emergencies
 animal and human bites, 2200
 snakebites, 2200
 clinical manifestations, 2200–2201
 management, 2201–2202
 spider bites, 2202
 tick bites, 2202
 Environmental Protection Agency (EPA), 2165
 Envoy esteem, 1960. *See also* Implanted hearing devices
 Enzymatic débridement, 856
 Enzyme immunoassay (EIA), 1007
 Enzyme-linked immunosorbent assay (ELISA), 1007
 Eosinophil chemotactic factor of anaphylaxis, 1041
 Eosinophils, 889
 Epicardium, 561
 Epicondylitis, 1154
 Epicutaneous immunotherapy (EPIT), 1053
 Epicutaneous tests, 1044
 Epidermal growth factor receptor (EGFR), 304
 Epidermis, skin, 1799
 Epidermopoiesis, 1843
 Epididymectomy, 1770
 Epididymitis, 1770
 Epidural anesthesia, 428
 advantages of, 428
 Epidural hematomas (EDHs) symptoms, 2059
 Epidural infusions, 448
 Epidural monitor, 2002
 Epigastric area, 668
 Epigastric distress, 1420
 Epigenetics, 117
 Epiglottitis, 463
 Epinephrine, 820
 Epiphyseal plate, 1097
 Epiphyses, 1097
 Epirubicin, 321t
 Epistaxis, 494
 Epitopes, 987
 Eplerenone, 1483
 for hypertension, 890t
 Epoetin alfa, 1125
 Epoprostenol, 575
 Eprosartan, for hypertension, 872t
 Epstein-Barr virus (EBV), cancer and, 304
 Eptifibatide, 661
 Epzicom (3TC/ABC), 1018t
 Equianalgesia, 211
 Equilibrium radionuclide angiocardigraphy (ERNA), 679
 ERCP. *See* Endoscopic retrograde cholangiopancreatography
 Erectile dysfunction, 1747



- Erlotinib in pancreatic carcinoma, 1439
 Erosion, 1807t
 Erythema, 1039
 Erythrocytapheresis, 896t
 Erythrocytes, 896. *See also* Red blood cells (RBCs)
 Erythrocyte sedimentation rate (ESR), 970
 Erythroderma. *See* Generalized exfoliative dermatitis
 Erythroid cells, 916
 Erythroid-stimulating agents, 963
 Erythromelalgia, 965
 Erythroplakia, 1230t
 Erythropoiesis, 887–888
 Erythropoietin (EPO), 323
 Eschar, 1817
 Escharotomy, 1871
Escherichia coli, 1605
 ESKD. *See* End-stage kidney disease
 Esmolol, 2210
 Esomeprazole, 1135
 Esophageal adenocarcinoma (EAC), 1257
 Esophageal banding therapy. *See* Endoscopic variceal ligation (EVL)
 Esophageal cancer, 1260
 adenocarcinoma, 1260
 assessment and diagnostic findings, 1261
 clinical manifestations, 1261
 medical management, 1261
 palliative treatment, 1261
 surgical resection of esophagus, 1261
 transhiatalesophagectomy, 1262f
 nursing management, 1268
 squamous cell carcinoma, 1260
 stages of, 1260
 Esophageal candidiasis, HIV infection and, 1008
 Esophageal Doppler probes, 688
 Esophageal manometry, 1244
 Esophageal spasm, 1253–1254
 Esophageal speech, 517
 Esophageal sphincter
 lower, 1210, 1224
 upper, 1224
 Esophageal varices, 1375–1380
 Esophagogastrroduodenoscopy (EGD), 1221
 Esophagojejunostomy, 1278
 Esophagomyotomy, 1253
 Esophagus, 1252
 Esophagus, disorders of, 1212
 Essential hypertension. *See* Primary hypertension
 Essential thrombocythemia (ET), 967–968
 assessment and diagnostic findings, 967
 clinical manifestations, 967
 complications, 967
 medical management, 967–968
 nursing management, 968
 Estradiol, 1643
 Estrogen, 1643
 Etanercept, 1073t
 Ethacrynic acid, 935c
 Ethics committees, 26
 Ethnicity, definition of, 72
 Ethylenediaminetetraacetic acid (EDTA), 932
 Etomidate, 427t
 Etoposide, 321t
 Etravirine (ETR), 1019t
 Eupnea, 477
Euthanasia, Assisted Suicide and Aid in Dying, 387
 Euthyroid, 1453
 Everolimus, 1598t
 Evidence-based practices (EBPs), 9–10
 bundles, 9
 Evisceration, 1931
 EVL. *See* Endoscopic variceal ligation
 Exacerbations, 1083
 Exchange lists, for meal planning, 1494
 Excision, 1876
 Excisional biopsy, 313
 of breast, 1716
 Exemestane, 1734
 External-beam radiation therapy (EBRT), 1279–1280
 Ezetimibe, 672, 732t
F
 Family violence, abuse, and neglect
 assessment and diagnostic findings, 2211
 clinical manifestations, 2211
 management, 2211–2212
 Fatigue
 acute, 352
 cancer-related, 352
 management of, 352–354
 sources of, 352c
 Fats
 in diabetic diet, 1494
 metabolism, role of liver in, 1366
 wound healing and, 404t
 Fear, preoperative, 410
 Fecal incontinence, 1286–1287
 assessment and diagnostic findings, 1288
 clinical manifestations, 1288
 medical management, 1289
 nursing management, 1289
 pathophysiology, 1290–1291
 Federal, state, and local responses to emergencies
 federal agencies, 2219–2220
 incident command system, 2220–2221
 state and local agencies, 2220
 Female physiologic processes. *See also* Women's health
 diagnostic studies for, 1652
 colposcopy and cervical biopsy, 1653
 computed tomography, 1655
 cryotherapy, 1653
 dilation and curettage, 1653
 endometrial biopsy, 1653
 endoscopic examinations, 1653–1654
 hysterosalpingography, 1655
 hysteroscopy, 1654
 laparoscopy, 1653–1654
 laser therapy, 1653
 loop electrosurgical excision procedure, 1653
 magnetic resonance imaging, 1655
 Pap smear, 1652
 ultrasonography, 1655
 genetic factors and, 1646c
 management of, 1655–1656
 abortion, 1664–1666
 contraception, 1658–1663
 dyspareunia, 1658
 ectopic pregnancy, 1669–1671
 infertility, 1666–1668
 menopause, 1671–1673
 menstrual disorders, 1656–1658
 menstruation, 1656
 perimenopause, 1671
 preconception/periconception health care, 1668–1679
 Female reproductive system, 1641
 age-related changes in, 1644t
 anatomy of, 1641
 external genitalia, 1641–1642
 ovaries, 1643
 uterus, 1642–1643
 vagina, 1642
 function of
 menopausal period, 1644
 menstrual cycle, 1643–1644
 ovulation, 1643
 Fentanyl, 213
 characteristics of, 231t
 equianalgesic dose chart for, 211
 Fiberglass, 1166
 casts, 1166
 Fibrocystic breast changes, 1718
 Fibroid tumors, 1692
 Fine-needle aspiration (FNA), 1716
 for thyroid masses, 1455
 First-intention healing
 definition of, 437
 postsurgical, 449
 Fissure, 1286
 Fistula, 1286
 anal, 1334
 vagina, 1686–1687
 Fitz-Hugh–Curtis syndrome, 1684
 Flaccidity, 2076
 Flaccid muscle, 2236
 Flecainide, for atrial fibrillation, 701
 Flucytosine, 1025
 Fludarabine, 954, 959
 Fluid balance
 burn injuries, 1884
 prevention of infections, 1884
 5-Fluorouracil, 321t
 Flutter valve, 627f
 FNA. *See* Fine-needle aspiration
 Foam dressings, 1818
 Focused assessment, 84
 Focused assessment with sonography for trauma (FAST), 2194
 Folate
 deficiency, 887
 metabolism, 887
 Food allergy, 1061–1062
 assessment and diagnostic findings, 1061
 clinical manifestations, 1061
 medical management, 1061
 nursing management, 1062
 Food poisoning, 2205
 assessment, 2205
 Foot and leg problems
 diabetes and, 1525
 foot care tips, 1525
 management, 1525
 neuropathic ulcers, 1525f
 neuropathy and, 1524
 peripheral vascular disease and, 1525
 Foot problems, 1119–1121
 callus, 1120
 causes of, 1120
 corn, 1120
 hallux valgus, 1121
 hammer toe, 1120
 ingrown toenail, 1120
 Morton neuroma, 1121
 nursing management, 1122
 pes cavus, 1121



- pes planus, 1121
plantar fasciitis, 1121
Forced end expiratory flow, 486f
Forced expiratory flow, 486f
Forced expiratory volume, 486f
Forced midexpiratory flow, 486f
Forced vital capacity (FVC), 486f
Foreign bodies
 ear and, 1946
 in esophagus, 1256
 ocular, 1924–1926
Fracture, 1159
 clinical manifestation, 1159
 closed, 1159
 comminuted, 1159
 emergency management, 1159
 greenstick, 1157
 healing, 1099
 healing and complications, 1161
 intra-articular, 1159
 medical management, 1159–1160
 nursing management, 1160–1161
 open, 1159
 reduction, 1152
 types of, 1159
Fracture Risk Assessment Tool (FRAX), 1104
Frank–Starling law, 656
Frey syndrome, 1235
Frostbite
 assessment and diagnostic findings, 2197
 management, 2197–2198
FSH. *See* Follicle-stimulating hormone
Fulminant hepatic failure
 treatment, 1393
 viral hepatitis and, 1393
Fusion inhibitor, 1020t
- G**
Gabapentin, 217, 1091, 1166, 1346c, 1524, 1837, 2023t, 2043, 2110
 in chronic low back pain, 1115
 in neuropathic pain, 217, 922
 in trigeminal neuralgia, 2108
Gait
 assessment of, 1106
 crutch, 46c
 staggering, 2114, 2116
 waddling, 1140, 1141
Gallbladder, 1365, 1365f
 anatomy of, 1417
 bile in, storage of, 1366, 1417
 disorders of, 1418
 cholecystitis, 1418
 cholelithiasis, 1418–1426
 functions of, 1417
 surgery and nursing process, 1426–1428
 assessment, 1426
 complications management, 1427
 continuing and transitional care, 1428
 diagnosis, 1426
 evaluation, 1428
 goals, 1426
 interventions, 1426–1428
 nutritional status, 1427
 pain relief, 1426–1427
 patient education, 1427–1428, 1428c
 skin integrity and promoting biliary drainage, 1427
 ventilation, adequate, 1427
Gallium scans, lung, 490
Gallop sounds, heart, 669
Gallstone, 1418–1419, 1419f. *See also* Cholelithiasis; Gallbladder
Gamete intrafallopian transfer (GIFT), 1668
Gamma-aminobutyric acid (GHB), 1967t, 2097
Gamma-glutamyl transferase (GGT), 1369
Gamma-glutamyl transpeptidase (GGTP). *See* Gamma-glutamyl transferase (GGT)
Gamma-hydroxybutyrate, 2206t, 2213
Gamma knife radiosurgery, 2109
Gamma rays, 316, 317, 678, 1455, 1987
Ganciclovir, 1025, 1909, 1933
Ganglion, 1118
Gardnerella-associated bacterial vaginosis, 1678t
GAS. *See* General adaptation syndrome
Gas exchange, 463. *See also* Respiration; Respiratory system
 impaired, after cardiac surgery, 756c, 759
 oxygen transport, effects of pressure on, 469
 oxyhemoglobin dissociation curve, 469–470, 469c
 partial pressure of gases, 467–469
 and respiratory failure, 556
Gastrectomy, for gastric cancer, 1278–1279
Gastric acid stimulation test, 1225
Gastric analysis, 1225
Gastric banding, 1354–1355, 1356f
Gastric cancer, 1277–1283
 advanced disease, 1278
 assessment and diagnostic findings, 1278
 chemotherapy for, 1279
 clinical manifestations, 1278
 diet as risk factor for, 1278
 early-stage disease, 1278
 gerontologic considerations, 1280
 H. pylori infection and, 1278
 incidence of, 1277–1278
 inherited cancer predisposition syndromes and, 1278
 medical management, 1278–1280
 nursing process, 1280–1283
 anxiety reduction, 1281
 assessment, 1280–1281
 continuing and transitional care, 1283
 evaluation, 1283
 home care checklist, 1282c
 nursing diagnosis, 1281
 nursing interventions, 1281–1283
 nutritional status, 1281
 pain relief, 1281
 patient and family education, 1281
 planning and goals, 1281
 psychosocial support, 1281
 pathophysiology, 1278
 population at risk, 1277–1278
 prognosis, 1278
 radiation therapy for, 1279
 risk factor for, 1278
 screening programs, 1278
 surgical management, 1278–1279
 complications of, 1279
 esophagojejunostomy, 1278
 gastric resection, 1279
 palliative procedures, 1279
 proximal partial (subtotal) gastrectomy, 1279
 radical partial (subtotal) gastrectomy, 1278–1279
 total gastrectomy, 1278
 targeted therapies for, 1279
 uncertainty and care needs in patients with, 1282c
Gastric function, 1226–1227
Gastric residual volumes (GRVs), 284, 1246
Gastric ulcer, 1080, 1225, 1271–1272, 1580
Gastrinomas, 1271
Gastritis, 1267–1270
 acute, 1267
 assessment and diagnostic findings, 1268
 chronic, 1267
 clinical manifestations, 1268, 1268t
 erosive, 1267, 1267f
 H. pylori infection and, 1267
 medical management, 1268
 nursing management
 anxiety reduction, 1268
 continuing and transitional care, 1270
 fluid balance, 1270
 home care checklist, 1270c
 nutrition, 1268, 1270
 pain relief, 1270
 patient education, 1270
 pathophysiology, 1267–1268
 pharmacotherapy for, 1269t
 stress-related, 1267
Gastrocolic reflex, 1286, 1289
Gastroduodenal manometry, 1224
Gastroesophageal reflux disease (GERD), 545, 1213, 1228, 1257, 1271, 1293
 diagnostic testing, 1257
 management of, 1257
 pyrosis and regurgitation in, 1257
Gastroesophageal sphincter, 1249, 1252
Gastrointestinal (GI) system, 1209
 age-related changes in, 1212, 1213t
 anatomic and physiologic overview, 1209–1212
 blood supply, 1209, 1210f
 functions of GI tract, 1210–1212
 innervation, 1209–1210
 organs and associated structures, 1209, 1209f
 assessment of, 1212
 health history, 1213–1215
 physical examination, 1215–1216
 diagnostic evaluation, 1216
 abdominal ultrasonography, 1217–1218
 breath tests, 1217
 computed tomography, 1220
 endoscopic procedures, 1221–1224
 gastric acid stimulation test, 1225
 gastric analysis, 1225
 gastrointestinal motility studies, 1221
 genetic testing, 1218–1219, 1218c
 imaging studies, 1219–1221
 laparoscopy (peritoneoscopy), 1225
 lower GI tract study, 1219–1220
 magnetic resonance imaging, 1220
 manometry and electrophysiologic studies, 1224–1225
 nursing interventions for, 1217–1220
 pH monitoring, 1225
 positron emission tomography, 1220–1221
 scintigraphy, 1221
 serum laboratory studies, 1217
 stool tests, 1217
 upper GI study, 1219
 gerontologic considerations, 1212, 1213t
Gastrointestinal varice, 1394
Gastroparesis, 1249



- Gastrostomy, 1249–1259
 GATA2 deficiency, 1006t
 Gatorade, 543, 1323, 1514
 GBS. *See* Guillain-Barré syndrome
 GCS. *See* Glasgow Coma Scale
 GDS. *See* Geriatric Depression Scale
 Gemcitabine, 321t, 324, 1439
 Gemfibrozil, 731t, 828
 General adaptation syndrome (GAS), 100–101
 General anesthesia, 424–425
 inhalation, 425–426
 intravenous administration, 426–427t,
 426–428
 stages, 424
 Generalized exfoliative dermatitis, 1845
 General pruritus, 1829–1830
 gerontologic considerations, 1829
 medical management, 1830
 nursing management, 1830
 pathophysiology, 1829–1830
 pharmacologic therapy, 1830
 systemic disorders associated with, 1829c
 Genes, 117, 118
 cell division, 120
 and chromosomes, 119–120
 human variation, role in, 118–121
 mutations, 120–121, 121f
 structure and function, 119
 Genetic counseling, 136–138
 across lifespan, 137c
 communicating information to patients, 138
 components of, 137c
 follow-up, 138
 patient preparation for genetics evaluation,
 137
 support throughout, 138
 Genetic imprinting, 124
 Genetic Information Nondiscrimination Act
 (GINA), 117, 132
 Genetics, 117
 adult-onset conditions, testing and screening
 for, 127–128, 128–129t
 nursing role in, 130
 chromosomal differences and genetic
 conditions, 124
 ethical concerns, 131–132
 in health assessment, 134–135
 family history assessment, 134, 135c
 physical assessment, 135
 psychosocial assessment, 136, 136c
 in health care, application of, 117
 future perspective, 138
 inheritance patterns, 121, 122t
 autosomal dominant inheritance,
 121–122, 122f, 122t
 autosomal recessive inheritance, 122t,
 123, 123f
 mitochondrial inheritance, 123–124
 multifactorial genetic conditions, 124,
 124f
 nontraditional inheritance, 124
 X-linked inheritance, 123, 124f
 in nursing practice, understanding of,
 117–118, 134
 Precision Medicine Initiative, 117
 referral, 135c
 social and cultural concerns, 133–134
 Genetic screening, 126
 applications for, 127t
 population screening, 127
 of pregnant women, 126
 prenatal, 126
 types of, 127t
 Genetic services, 136–137
 Genetic specialists, 136–138
 Genetic testing, 125–126, 138
 approaches to, 125
 genotypic methods, 125
 phenotypic methods, 125
 for diagnosis of inherited conditions, 125
 examples of current uses, 125t
 nurses role in, 126
 predictive, 126c
 prenatal, 125
 use of, 125
 The Genetic Testing Registry, 125
 Genetic variations, 121
 Genital herpes, 1682–1684
 clinical manifestations, 1682
 HSV-2 infection, 1682
 medical management, 1682
 nursing process
 anxiety reduction, 1683
 assessment, 1682
 diagnosis, 1683
 evaluation, 1683–1684
 infection prevention, 1683
 nursing interventions, 1683–1684
 patient education, 1683
 planning and goals, 1683
 strategies for relieving pain, 1683c
 pathophysiology, 1682
 Genitourinary system, 172
 age-related changes in, 170t
 and disorders, 172
 Genomics
 definition of, 117
 framework for nursing practice, 117–118,
 118c, 134
 in health assessment, 134–135
 personalized genomic treatments, 130
 Genomic testing, 128, 130
 Genotype, 119
 Gentamicin, 1567, 1954, 2155
 GERD. *See* Gastroesophageal reflux disease
 Geriatric Depression Scale (GDS), 181, 182c
 Geriatric syndromes, 166, 186–189
 atypical responses, 188
 dizziness, 187
 emotional impact, altered, 188
 falls and falling, 187
 mobility, impaired, 187
 susceptibility to infection, 188
 systemic response, altered, 188–189
 urinary incontinence, 187–188
 Geriatric triad, 187
 GH. *See* Growth hormone
 Giant cell arteritis (GCA), 1087
 Gilbert syndrome, 1372
 GINA. *See* Genetic Information
 Nondiscrimination Act
 Gingivitis, 1228, 1229, 1231t
 Glare testing, 1904
 Glasgow Coma Scale (GCS), 1994, 2004,
 2062, 2062c, 2064
 level of consciousness, 2064
 severe head injury, 2064
 Glaucoma, 1909–1914
 assessment and diagnostic findings, 1912
 classification, 1911, 1912t
 clinical manifestations, 1911–1912
 continuing and transitional care, 1914
 medical management, 1912–1913
 narrow-angle, 1911, 1912t
 nursing management, 1914
 optic nerve, changes in, 1912
 pathophysiology, 1911
 patient education, 1914, 1914c
 pharmacologic therapy, 1913, 1913t
 physiology, 1910–1911, 1911f
 primary, 1911
 risk factors for, 1911c
 secondary, 1911
 silent thief of sight, 1911
 surgical management, 1913–1914
 visual changes caused by, 1912f
 wide-angle, 1911, 1912t
 Glomerulonephritis, 1555, 1558
 acute, 1558–1560
 assessment and diagnostic findings, 1559
 care in hospital, 1559
 clinical manifestations, 1559
 complications, 1559
 dialysis in, 1559
 medical management, 1559
 pathophysiology, 1558–1559, 1558f
 chronic, 1560–1561
 assessment and diagnostic findings, 1560
 medical management, 1560
 nursing management, 1560–1561
 pathophysiology, 1560
 symptoms of, 1560
 continuing and transitional care, 1559, 1561
 patient education, 1559, 1561
 Glucose metabolism, 1490
 abnormalities of, 1384
 glucocorticoids and, 1474
 insulinomas and, 1442
 role of liver in, 1366
 Glycated hemoglobin, 1499
 Goiter, 1445, 1453
 endemic (iodine-deficient), 1467
 iodine deficiency and, 1453
 nodular, 1467
 Goodpasture syndrome, 1560
 Gout, 1089–1091
 clinical manifestations, 1090
 comorbid conditions with, 1089
 hyperuricemia in, 1089
 incidence of, 1089
 medical management, 1090
 nursing management, 1091
 pathophysiology, 1089–1090
 pharmacologic therapy, 1090t
 tophi in, 1090
 Graft-versus-host disease (GVHD), 301, 328,
 899, 905c
 Greenstick fractures, 1157, 1158f
 Grief, 367
 after death, 384–385
 anticipatory, 384, 384t
 complicated, 386
 definition, 384
 stages of, 384
 types of, 384t
 Growth hormone (GH), 1418, 1446, 1514
 insufficient secretion of, 1450
 oversecretion of, 1450
 skeletal growth and remodeling, effect on,
 1099
 GRVs. *See* Gastric residual volumes
 Guillain-Barré syndrome (GBS), 2103–2106
 annual incidence of, 2103



- assessment and diagnostic findings, 2104
 clinical manifestations, 2103–2104
 home care checklist, 2106c
 medical management, 2104
 Miller–Fisher variant, 2103, 2104
 nursing process
 anxiety reduction, 2105
 assessment, 2104
 complications monitoring, 2105
 continuing and transitional care, 2106
 diagnosis, 2104
 fatigue reduction, 2105
 nursing interventions, 2104
 nutrition, 2105
 patient education, 2105–2106
 physical mobility enhancement, 2105
 planning and goals, 2104
 respiratory function, 2104–2105
 pathophysiology, 2103
 subtypes of, 2103
 GVHD. *See* Graft-versus-host disease
 Gynecomastia, 1368, 1708, 1712, 1739–1740, 1754, 1761
- H**
- Habit retraining, 1614c
 Habit training, 1293
 Habitual abortion, 1664–1665
- Hair
 assessment of
 color and texture, 1811
 distribution, 1811
 loss, 1811–1812
 color, 1800
 of eyes, 1800
 follicles, 1800
 functions, 1800
 growth, 1800
 male pattern baldness, 1800, 1811–1812
 of skin, 1800
 Halitosis, 506, 522, 1255, 1261, 1268
 Hallux valgus, 1121, 1121f
 Haloperidol, 381, 707, 760, 2210, 2214
 for alcohol withdrawal syndrome, 2210
 delirium management, 760
 for patients who are overactive, 2214
 Halothane (Fluorothane), 425t, 425t, 432, 1392
 Hammer toe, 1120
 Hand, 1181
 Hand hygiene, 2150–2151
 methods, 2150c
 HAP. *See* Hospital-acquired pneumonia (HAP)
 Haptens, 1039
 Hardwire cardiac monitoring, 675–676
 Hartmann procedure, 1302, 1302f
 Hashimoto thyroiditis, 1267, 1454–1455
 Haversian system, 1098
 Hay fever. *See* Allergic rhinitis
 HCC. *See* Hepatocellular carcinoma (HCC)
 HD. *See* Hemodialysis (HD)
 Headache
 assessment and diagnostic findings, 2027–2028
 manifestations, 2027
 medical management, 2028–2029
 nursing management, 2029
 pathophysiology, 2026–2027
 post-lumbar puncture, 1988, 1990
 prevention, 2028
 Head injuries
 assessment and diagnostic findings, 2057
 clinical manifestations, 2057
 gerontologic considerations, 2057
 medical management, 2057–2058
 in older adults, 2058, 2058c
 pathophysiology, 2056–2057, 2057f
 prevention, 2056
 veteran considerations, 2057
 Head-tilt/chin-lift maneuver, 813
 Health and Human Services (HHS), 306, 1016, 1570, 2157
 Health assessment
 family history, 134
 genetics, 77, 136
 physical, 135
 psychosocial, 136
 role of nurse conducting, 72–73
 Health belief model, 64
 Health care, 7
 Health care–associated infections (HAIs), 1410, 1928, 2144
 Health care–associated methicillin-resistant *Staphylococcus aureus* (HA-MRSA) infection, 2154
 Health care–associated pneumonia (HCAP), 531, 531c
 Health care delivery system, 5
 influences on
 health problems, changes in, 7–8
 interprofessional collaborative practice, 9–10
 population demographics, 7
 quality, safety, and evidence-based practice, 9
 technology and genetics, advances in, 8–9
 nursing practice in, 10–12
 Healthcare Information Management Systems Society (HIMSS), 8
 Health education
 health promotion and, 56–58
 informed decision-making and, 57
 purposes of, 56–58
 Health histories, 14, 73–83
 components of
 biographical information, 74–75
 chief complaint, 75
 family history, 75–76
 past history, 75
 patient profiles, 76–83
 present health concern or illness, 75
 review of systems, 76
 informant, 74
 people with disability, 81
 Health informatics, 8
 Health information technology (HIT), 8
 Health literacy, 58
 Health promotion, 6
 after myocardial infarction and acute coronary syndromes, 745c
 in cancer, 309c
 cognitive function, 179c
 components of, 65
 definition, 63–64
 health education and, 56–58
 models, 64
 nursing implications, 68
 strategies, 66–68
 Healthy People 2030, 8, 63
 Hearing aid, 1958–1961
 care of, 1959
 implanted devices, 1960–1961
 options and features of, 1959
 problems, 1958
 types, 1960t
 Hearing disorders, genetics of, 1943
 Hearing guide dogs, 1961
 Hearing loss, 1943–1946
 acoustic trauma, 1945
 assessment, 1944
 clinical manifestations, 1944
 communicating with people have, 1946c
 gerontologic considerations, 1945
 medical management, 1945
 noise-induced, 1945
 nursing management, 1945–1946
 prevention, 1944–1945
 risk factors, 1945
- Heart
 anatomy, 651–653
 chambers, 651–653
 functions of, 653–656
 hemodynamics, 655–656
 left catheterization, 681–682
 of older adults, 656
 refractory periods, 654–655
 right catheterization, 681
 structure, 652f
 valves, 653
 Heart auscultation, 668–671
 Heart failure (HF)
 ACC/AHA classification of, 799t
 acute decompensated, 798
 adjunct therapies for
 management of sleep disorders, 804
 nutritional therapy, 803
 oxygen therapy, 803
 procedural and surgical interventions, 804
 in African Americans and Hispanics, 794
 assessment and diagnostic findings, 796c, 798–799
 causes of, 794
 clinical manifestations, 796–798
 congestive, 797–798
 continuing and transitional care, 810–811
 diastolic, 796
 ejection fraction, assessment of, 798
 fluid volume overload in, 795
 in fulminant myocarditis, 787
 home care checklist, 810c
 incidence of, 794
 in infective endocarditis, 786
 laboratory studies, 798–799
 left-sided, 796–797
 management goals, 799
 with midrange ejection fraction (HFmrEF), 798
 neurohormonal compensatory mechanisms in, 794–795
 New York Heart Association (NYHA) classification of, 798t
 nursing process
 activity tolerance, promoting, 806
 anxiety management, 807
 assessment, 805
 complications management, 808–809
 diagnosis, 805
 evaluation, 811
 facts about dietary sodium, 807c
 fluid volume management, 806–807
 health history, 805
 nursing interventions, 806–811
 physical activity for, 806c



- Heart failure (*continued*)
 physical examination, 805
 planning and goals, 805–806
 older adults and, 804
 pathophysiology, 794–796, 795f
 pharmacologic therapy, 799–803, 800t
 adjunct medications, 800t, 803
 angiotensin system blockers, 800t, 801–802
 beta-blockers, 800t, 802
 digitalis, 800t, 802
 diuretics, 800–801, 800t, 801c
 hydralazine and isosorbide dinitrate, 800t, 802
 ivabradine, 800t, 802
 IV inotropes, 800t, 802–803
 with preserved ejection fraction, 798
 with reduced Ejection Fraction, 795
 with reduced ejection fraction, 798
 right-sided, 797
 systolic, 795
- Heart murmurs, 85, 656, 671c, 680, 710
- Heat-induced illnesses, 296–297
- Helicobacter pylori* (*H. pylori*), 1267
- Helper T cells, 993
- Hemarthrosis, 1110–1111, 1156, 1180
- Hematemesis, 1270, 1272
- Hematochezia, 1268, 1326, 1367
- Hematocrit, 673t, 892
- Hematologic disorders
 assessment
 health history, 891, 893t
 physical assessment, 892, 893t
 diagnostic evaluation
 bone marrow aspiration and biopsy, 894
 hematologic studies, 892–894
 ethnicity and, 891
 genetics, 892c
 infection and bleeding in, risk of, 905c
 therapeutic approaches to
 blood component therapy, 896–897, 897t
 hematopoietic stem cell transplantation, 895–896
 phlebotomy, 896
 splenectomy, 895
- Hematologic system
 blood, 885–890, 886f
 cells, 887t
 erythrocytes (red blood cells), 887–888
 leukocytes (white blood cells), 889–890
 plasma and plasma proteins, 890
 platelets (thrombocytes), 890
 bone marrow, 885, 886f
 reticuloendothelial system (RES), 890
- Hematomas, 664, 717, 840, 931, 936
- Hematopoietic stem cell transplantation (HSCT), 312, 922, 926, 954
 for acute lymphocytic leukemia, 956
 for acute myeloid leukemia (AML), 954
 allogeneic, 326–327, 954, 957, 959, 963
 autologous, 326, 328, 974, 977, 979
 cancer risk and, 320
 for chronic myeloid leukemia (CML), 955
 for hematologic disorders, 895–896
 myeloablative, 326
 nonmyeloablative, 326
 nursing management, 328–329
 for primary immune deficiency diseases, 1005
 for primary myelofibrosis, 968
 for sickle cell disease, 916
 syngeneic, 326
- Hematopoietic system, 323
- Hemodialysis (HD), 1523, 1577–1578, 1578f
 complications, 1580
 COVID-19 considerations, 1580
 dialyzers, 1578
 nursing management
 continuing and transitional care, 1583
 home hemodialysis, 1583
 nutritional and fluid therapy, 1581
 patient education, 1582
 pharmacologic therapy, 1580–1581
 psychosocial needs, 1581–1582
 risk factor for developing sleep disturbances, 1580
 vascular access
 arteriovenous fistula, 1579
 arteriovenous graft, 1579–1580
 devices, 1579
- Hemodilution, 898–899
- Hemodynamic monitoring, 412, 509, 655, 683–688
- Hemofilter, 1568, 1584
- Hemoglobin, 673t, 887
- Hemolysis, 910
- Hemolytic anemias, 910, 911c
 Glucose-6-Phosphate Dehydrogenase (G-6-PD), 926
 immune, 926–928
 sickle cell disease, 919–926
- Hemolytic jaundice, 1371
- Hemophilia
 classification of, 936
 clinical manifestations, 936
 medical management, 936–937
 nursing management, 937
 older adults and, 937–938
- Hemophilic arthropathy, 936, 936f
- Hemoptysis, 455, 470, 473–474
- Hemorrhage, 440, 440t
 internal, 2194
 management of
 external hemorrhage, 2189–2190
 fluid replacement, 2189
 internal hemorrhage, 2190
 pressure points for, 2190f
- Hemorrhagic blebs, 2198
- Hemorrhagic cystitis, 323, 328, 978t
- Hemorrhagic stroke, 1970, 2031, 2048
 assessment and diagnostic findings, 2049
 clinical manifestations, 2049
 complications, 2049–2050
 home care checklist, 2053c
 medical management, 2050–2051
 nursing process, 2051–2053
 in older adults, 2053
 pathophysiology, 2048–2049
 prevention, 2049
- Hemorrhoids, 1216, 1288, 1333, 1334f, 1335
- Hemosiderin, 928
 staining, 853
- Hemothorax, 466, 529, 2231
- Hemovac drains, 452
- Heparin, 735
 for angina, 734t
 for venous thromboembolism, 848t
- Heparin-induced thrombocytopenia (HIT), 735, 939–940
- Hepatic artery port, 1407
- Hepatic cirrhosis
 assessment and diagnostic findings, 1395
 clinical manifestations, 1393–1395
 medical management, 1395
 nursing management, 1395, 1403–1404
 pathophysiology, 1393
 types, 1393
- Hepatic disorders
 ascites, 1372–1375
 esophageal varices, 1375–1380
 genetics, 1368c
 hepatic encephalopathy and coma, 1380–1384
 jaundice, 1371–1372
 liver cancer, 1404–1407
 manifestations of hepatic dysfunction
 edema and bleeding, 1384
 pruritus and other skin changes, 1384
 vitamin deficiency, 1384
 nonviral hepatitis, 1391–1392
 portal hypertension, 1372
 viral hepatitis, 1384–1391
- Hepatic encephalopathy, 1371, 1373, 1375, 1380–1384
 assessment and diagnostic findings, 1382
 clinical manifestations, 1381–1382
 continuing and transitional care, 1383–1384
 medical management, 1382–1383
 nursing management, 1383–1384
 nutritional management of, 1382c
 pathophysiology, 1381
 patient education, 1383
 stages of, 1383t
 subclinical/minimal, 1381
- Hepatic sinusoidal obstructive syndrome (HSOS), 327
- Hepatic vein, 1209, 1365, 1366f, 1369, 1374, 1374f, 1376, 1380, 1392
- Hepatic venous pressure gradient (HVPG), 1376
- Hepatitis
 nonviral, 1391–1392
 viral, 1384–1391
- Hepatitis A
 assessment and diagnostic findings, 1386
 clinical manifestations, 1386
 dietary management, 1387c
 incubation period of virus, 1386
 medical management, 1386–1387
 nursing management, 1387
 prevention of, 1386, 1387c
 transmission of, 1385
- Hepatitis B
 assessment and diagnostic findings, 1388
 clinical manifestations, 1388
 continuing and transitional care, 1390
 incubation period of virus, 1387
 medical management, 1389–1390
 mortality rate, 1388
 nursing management, 1390
 in older adults, 1388
 prevention, 1388–1389
 active immunization, 1389
 passive immunity, 1389
 preventing transmission, 1389
 risk factors, 1388c
 self-care, 1390
- Hepatitis B immune globulin (HBIG), 1389
- Hepatitis C, 1390–1391
 risk factors, 1390, 1391c
 treatment for, 1391
- Hepatitis D virus (HDV), 1391
- Hepatitis E virus (HEV), 1391
- Hepatitis G virus (HGV)/GB virus-C (GBV-C), 1391



- Hepatocellular carcinoma (HCC), 928, 1217, 1388
- Hepatocellular jaundice, 1371
- Hepatocytes, 1365–1368, 1393, 1405, 1417, 1421
- Hepatojugular reflux, 671
- Hereditary angioedema, 1060
- Hereditary hemochromatosis, 927–928
- Hereditary hyperbilirubinemia, 1372
- HER-2/neu protein, 1734
- Hernia, 1257, 1302, 1303t, 1304, 1323, 1373, 1587, 1628, 1630, 1744, 1746, 1774
- Herniation, 1300, 1545, 1925, 1970
- Herpes labialis, 498c
- Herpes simplex, 532, 998, 1024, 1838
- Herpes simplex virus-1, 498c, 1230t
- Herpes simplex virus 2 (HSV-2), 1682
- Herpes simplex virus 2 (HSV2) infection, 1682
- Herpes zoster, 1024, 1809f, 1836–1838, 1837f
- Herpes zoster ophthalmicus, 1837
- Herpetic gingivostomatitis, 1231t
- Heterotopic ossification, 1130, 1161, 1166, 1183, 2081
- HHS. *See* Health and Human Services (HHS); Hyperglycemic hyperosmolar syndrome (HHS)
- Hiatal hernia, 188, 1252, 1254–1255
assessment and diagnostic findings, 1254
clinical manifestations, 1254
management, 1254–1255
paraesophageal, 1254
sliding, 1254
- HICS. *See* Hospital Incident Command System (HICS)
- Hidradenitis suppurativa (HS), 1831
- Hierarchy of Pain Measures, 204, 205c
- High cholesterol, 67, 127, 658, 672, 1497
- High-density lipoprotein (HDL), 656, 727, 1488c
- High-efficiency particulate air (HEPA) filter, 422, 960, 1049
- High-flux dialysis, 1578
- High linear energy transfer (LET), 317
- High sensitivity CRP (hs-CRP) test, 674, 728
- Hilus, 464
- HIMSS. *See* Healthcare Information Management Systems Society
- Hinduism, 90c
- Hinge joints, 1100
- Hip, prevention of External Rotation of the Hip, 41, 2077
- Hip fracture, 1183–1186
clinical manifestations, 1184
community-based or transitional care, 1186
extracapsular, 1184
gerontologic considerations, 1184
intracapsular, 1184
medical management, 1184–1185
nursing management, 1185–1186
older adult patient with, 1187–1191
periprosthetic, 1184
- Hip prosthesis, 1126. *See also* Total hip arthroplasty (THA)
preventing dislocation of, 1130, 1130f
- Hip spica casts, 1171
- Hirschsprung disease, 1287
- Hirsutism, 1479, 1598, 1692, 1800, 1812
- Histamine, 108, 1211t, 1225, 1829, 1872, 2028
- Histiocytes, 890, 989
- Histoplasma capsulatum*, 2146t
- HIT. *See* Health information technology (HIT)
- HIV/AIDS Prevention Research Synthesis Project, 1010
- HIV encephalopathy, 1023–1024
- HIV-1 nucleic acid tests, 1015
- HIV wasting syndrome, 1022
- HMG-CoA reductase inhibitors (statins), 701, 731t, 828, 935c
- Hodgkin lymphoma, 969–972
assessment and diagnostic findings, 971
clinical manifestations, 970–971
lymphocyte-depleted type, 970
lymphocyte-rich type, 970
medical management, 971–972
mixed cellularity type, 970
nodular lymphocytes predominant (NLPHL), 970
nodular sclerosis type, 970
nursing management, 972
pathophysiology, 970
- Holidays, observance of, 94
- Holter monitors, 676
- Homan sign, 847
- Home care, 190, 381, 629
routine, 373
self-care, 154–155
targeted therapies, 333
- Home care assistance, 2131
- Home care setting, 2158c
- Home health care, 49–53
cleanliness of a patient's home, 50
home environment, assessment of, 51, 52c
home visits
assessment need for, 53c
documentation of, 52–53
end of, 52
initial, 51–52
need and frequency of future visits, 52
personal safety precautions, 51, 51c
preparation for, 51
infection control, 50
medical management, 49c
nurse-patient relationship, 50
settings and, 50
telehealth, 8, 50
- Homeless population, 7
- Homeostasis, 98, 104–105, 112, 169, 174, 188, 225
constancy and, 98
definition, 98
mechanisms, 230–233
- Home ventilator care, 567c
- Homocysteine, 674
- Homografts, 774, 1859, 1883
- Hope
fostering of, 382
hindering categories, 382
nursing interventions to support, 382
terminal illnesses and, 382
- Hormonal contraceptives
benefits and risks of, 1661c
injectable contraceptives, 1661–1662
oral contraceptives, 1661
transdermal contraceptives, 1661
vaginal contraceptives, 1661
- Hormones
amine, 1447
autocrine action, 1447
classification and action of, 1446–1447
definition, 1446
by endocrine glands, 1446
function and regulation of, 1446
by GI mucosa, 1446
by kidney, 1446
paracrine action, 1447
peptide, 1447
protein, 1447
steroid, 1447
- Hormone therapy (HT), 656, 732, 1709
for menopause-related symptoms, 1672–1673
methods of administration, 1672–1673
risks and benefits, 1673
- Hospice and Palliative Nurses Association (HPNA), 369
- Hospice care, 363, 369, 371–373
eligibility criteria for, 373c
federal rules for, 373
four levels of, 373
Medicare-certified, 373
palliative care and, 190, 587, 619
in the United States, 372
use of, 372–373
- Hospital-acquired infections, 533, 677, 1605, 1866
- Hospital-acquired pneumonia (HAP), 531–533, 531c
- Hospital Incident Command System (HICS), 222
- Hot flashes, 221, 1671–1672, 1672c, 1693–1694, 1734c
alternative treatments for, 1673
- HPNA. *See* Hospice and Palliative Nurses Association (HPNA)
- HPV2, 331
- HPV4, 331
- HPV9, 331
- HPV16, 331
- Hrsutism, 1800
- HS. *See* Hidradenitis suppurativa (HS)
- HSG. *See* Hysterosalpingography (HSG)
- HSOS. *See* Hepatic sinusoidal obstructive syndrome (HSOS)
- HT. *See* Hormone therapy (HT)
- Human chorionic gonadotropin (hCG) levels, 1669
- Human Genome Project, 117–118
- Human immune deficiency virus (HIV), 1007–1008, 1686
assessment and diagnostic findings in, 1014–1016
follow-up testing, 1015
implication of test results, 1015c
screening blood tests, 1015t
depressive manifestations, 1024
epidemiology, 1008–1009
gastrointestinal manifestations, 1022
gynecologic manifestations, 1024
infection prevention, 1034c
infection stages, 1008t, 1013–1014
life cycle, 1014f
medical management, 1024–1025
neurologic manifestations, 1023–1024
nursing process
diagnosis, 1031
evaluation, 1034
nursing assessment, 1026, 1031
nursing interventions, 1032–1034
planning and goals, 1031
older adults and, 1009
oncologic manifestations, 1022–1023
pathophysiology, 1012–1013



- Human immune deficiency virus (*continued*)
 prevention of
 condoms, correct use of, 1010c
 in LGBT youth, 1011
 post-exposure prophylaxis (PEP), 1011–1012, 1012c
 preexposure prophylaxis (PrEP), 1010
 recommendations for standard precautions, 1012c
 reproductive education, 1011
 vaccination, 1012
 protecting against, 1009–1011, 1010c
 respiratory manifestations, 1021–1022
 risk factors, 1008c
 supportive care for, 1026
 transmission, 1009
 treatment, 1016–1021
 antidepressant therapy, 1025
 antidiarrheal therapy, 1025
 burden, 1033c
 chemotherapy, 1025
 complementary, alternative, and integrative therapies, 1026
 emotional and ethical concerns, 1034–1035
 nutrition therapy, 1025–1026
 of opportunistic infections and coinfection with hepatitis C, 1024–1025
- Human immune deficiency virus type 1 (HIV-1), 1009, 1013, 1015t
- Human insulins, 1500
- Human leukocyte antigen (HLA), 327, 904, 954, 1068, 1295, 1490, 1596
- Human papillomavirus (HPV), 1024, 1235
 medical management, 1681
 pathophysiology, 1681
 prevention, 1236, 1681–1682
 risk factors, 1681
- Human trafficking, 2213–2214
- Humate-P, 896
- Humeral neck, 1179, 1179f
- Humeral shaft, 1179–1180, 1180f
- Humoral immune response, 991c
 antibodies, role of, 992
 antigen–antibody binding, 992–993
 antigen recognition, 991–992
- Humoral
 (antibody-mediated) immunity tests, 1002c
- Huntington disease, 84, 120, 128, 128t, 2112, 2129–2131, 2130c
- Huntington gene (HTT), 2129
- Hybridomas, 330, 330f
- Hydralazine, 768, 801, 839, 874t, 946, 1082, 2050
- Hydralazine-isosorbide dinitrate, 800t, 802
- Hydration, 172, 185, 230, 386, 508, 520, 539–540, 570, 626, 632, 642, 645, 679, 682, 760, 777, 922–923, 980, 1057, 1143, 1148, 1178, 1215, 1234, 1248, 1300, 1336, 1471, 1610, 1809, 1817t, 2003, 2049
- Hydrocele, 1774
- Hydrocephalus, 2052
- Hydrochloric acid, 107, 257, 1210, 1211t, 1267
- Hydrochlorothiazide, 406t, 800t, 872t, 1473, 1954
- Hydrocodone, 208–209, 211t, 213, 832
- Hydrocolloids, 1324, 1816, 1818
- Hydrogels, 1818
- Hypercalcemia, 1556t
 assessment and diagnostic findings, 250–251
 clinical signs and symptoms, 250
 medical management, 251
 nursing management, 251
 pathophysiology, 250
- Hyperchloremia, 258
- Hyperglycemia, 242, 265, 274, 286, 297, 405, 732, 1248t, 1279, 1316, 1317t, 1430, 1475, 1479, 1488, 1490–1491, 1490f, 1493, 1498
 in diabetic ketoacidosis, 1514
 effects of, 1525
 hemorrhagic stroke and, 2050
 during hospitalization, 1528
 morning, 1502–1503, 1503c
 neurologic outcomes, 2039
 nursing management of, 1507
 during pregnancy, 1491
- Hyperglycemic hyperosmolar syndrome (HHS), 1516–1517
- Hyperinsulinism, 1442
- Hyperkalemia, 245–246, 1556t, 1560
 assessment and diagnostic findings, 246
 clinical signs and symptoms, 246
 emergency pharmacologic therapy, 247
 medical management, 246–247
 nursing management, 247
 pathophysiology, 246
- Hypermagnesemia, 253–254, 1556t
- Hypernatremia, 241–243, 1556t
 assessment and diagnostic findings, 242
 clinical manifestations, 242
 correction of, 243
 medical management, 242
 nursing management, 242
 pathophysiology, 242
 prevention of, 243
- Hyperphosphatemia, 256–257
- Hypertension, 440–441, 865, 2050
 assessment and diagnostic findings, 869–870
 laboratory tests, 870
 blood pressure classification and, 866, 866t, 869c
 causes, 867c
 classification system for, 866
 clinical manifestations, 868–869
 control rates in women, 866
 coronavirus disease 2019 (COVID-19) pandemic and, 875–876
 DASH (Dietary Approaches to Stop Hypertension) Diet, 871t
 medical management, 870–877
 pharmacologic agents, 871, 872t–875t
 medication adherence among African Americans with, 877c
 nursing process
 assessment, 877
 diagnosis, 877–878
 evaluation, 879
 nursing interventions, 878–879
 planning and goals, 878
 older adults and, 868, 876
 pathophysiology, 867–868
 prevalence of, 866
 primary, 867
 resistant, 870
 risk factors, 867c
 secondary, 867
 signs of, 870
- Hypertensive crisis, 879–880
- Hypertensive emergency, 880
- Hypertensive encephalopathy, 1559
- Hypertensive urgency, 880
- Hyperthermia, 107, 171, 292, 295, 453, 1876, 2196, 2197, 2210
 laser, 1406
 malignant, 432
- Hyperthyroidism, 1461–1467
 adjunctive therapy, 1464
 antithyroid medications, 1463–1464
 cardiac effects and, 1462
 Graves disease and, 1462
 home care checklist, 1466–1467
 nursing process, 1465–1467
 assessment, 1465
 continuing and transitional care, 1467
 coping measures, enhancing, 1465–1466
 evaluation, 1467
 normal body temperature, 1466
 nursing diagnoses, 1465
 nursing interventions, 1465–1466
 nutritional status, improving, 1465
 patient education, 1466–1467
 planning and goals, 1465
 self-esteem, improving, 1466
 in older adults, 1464–1465
 pharmacotherapy, 1462
 radioactive iodine therapy, 1462–1463
 surgical management, 1464
- Hypertonic fluids, 266
- Hypervolemia, 236–238
 assessment and diagnostic findings, 237
 clinical manifestations, 237
 detecting and controlling of, 238
 dietary restriction, 237–238
 hemodialysis or peritoneal dialysis, 237
 medical management, 237–238
 nursing management, 238
 pathophysiology, 237
 patient education of edema, 238
 prevention of, 238
- Hypoalbuminemia, 249, 896, 1307, 1556t, 1560, 1561, 1591, 1845
- Hypocalcemia, 1556t
 assessment and diagnostic findings, 249
 clinical manifestation, 248–249
 medical management, 249–250
 nursing management, 250
 pathophysiology, 248
- Hypochloremia
 assessment and diagnostic findings, 258
 medical management, 258
 nursing management, 258
 pathophysiology, 257
 signs and symptoms of, 257–258
- Hypochromia, 925
- Hypoglycemia during hospitalization, 1528
- Hypokalemia, 1556t
 assessment and diagnostic findings, 244–245
 burn injuries and, 1871
 clinical manifestations, 244
 medical management, 245
 nursing management, 245
 pathophysiology, 243–244
- Hypomagnesemia, 252–253, 1556t
- Hyponatremia, 1556t, 2052
 assessment and diagnostic findings, 240
 clinical manifestations, 240
 early detection and treatment, 241
 medical management, 240–241
 nursing management, 241
 pathophysiology, 239–240



- pharmacologic therapy, 241
- water restriction in, 240–241
- Hypophosphatemia, 1556t
 - assessment and diagnostic findings, 255
 - clinical manifestations, 255
 - medical management, 255–256
 - nursing management, 256
 - pathophysiology, 254–255
- Hypotension, 440
- Hypothalamic–pituitary–thyroid axis, 1453, 1453f
- Hypothermia, 431–432
- Hypothyroidism, 1455
 - causes, 1456c
 - clinical manifestations, 1456–1457, 1456f
 - home, community-based, and transitional care, 1460–1461
 - medical management
 - cardiac dysfunction, prevention of, 1457
 - medication interactions, prevention of, 1457
 - supportive therapy, 1457
 - nursing care plan, 1458c–1460c
 - nursing management, 1457–1461
 - signs and symptoms in older adults, 1461
- Hypotonic fluids, 266
- Hypovolemia, 233–236
 - assessment and diagnostic findings, 233–234
 - clinical manifestations, 233
 - correction of, 236
 - medical management, 234–236
 - nursing management, 236
 - pathophysiology, 233
 - prevention of, 236
- Hypovolemic shock, 286, 287, 296, 590, 896, 1303, 1429, 1433, 1595, 1670, 1870, 2012, 2167, 2168, 2190, 2204
 - fluid and blood replacement, 286–287
 - fluid replacement, 286, 286t
 - complications, 287
 - medical management, 285–286
 - nursing management, 287
 - pathophysiology, 285
 - risk factors, 285c
- Hypoxemia, 279–280, 287, 289, 430, 438, 471, 491, 511, 529, 540, 556, 559, 571–575, 590–592, 594–595, 604–605, 608–609, 614, 617, 631, 633, 639, 642–643, 645, 656, 696, 705, 760, 813, 851–852, 903–907, 1021, 1147, 1162, 1184, 1431, 2019, 2060, 2074
 - cerebral, 1971
 - nonfatal drowning and, 2199
 - refractory, 483
 - risk for, 447
 - subacute, 447
- Hypoxia, 104, 106, 240, 274, 277, 279, 298, 332, 381, 430, 440, 442, 467, 470, 475–476, 491, 510, 513, 520, 557, 563, 570, 608–609, 614, 705, 759–760, 794, 803, 813, 904, 919–920, 922–923, 1162, 1395, 1430, 1702, 1872, 1886, 2004, 2008t
- Hysterectomy, 1658, 1672, 1690, 1692–1697, 1701
 - laparoscopically assisted approach, 1702
 - nursing process
 - assessment, 1702–1703
 - body image, improving, 1703
 - diagnosis, 1703
 - evaluation, 1704
 - nursing interventions, 1703
 - pain relief, 1703
 - patient education, 1703–1704
 - planning and goals, 1703
 - postoperative management, 1702
 - preoperative management, 1702
 - robot-assisted, 1702
 - total, 1702
- Hysterosalpingography (HSG), 1655
- Hysteroscopy, 1654
- I**
- Idarubicin, 321t
- Ifosfamide, 321t
- IGRT. *See* Image-guided radiation therapy
- Ileal conduit
 - complications, 1608
 - nursing management, 1611–1613
 - fluid intake and relieving anxiety, 1629
 - home, community-based, and transitional care, 1629–1630
 - ostomy appliance, selection of, 1629
 - stoma and skin care, 1629
 - urine testing and caring for ostomy, 1629
 - patient education, 1630c
- Ileostomy, 1286
 - home care checklist, 1325c
 - nursing care plan, 1319c–1321c
 - in older adults, 1324
 - postoperative care, 1321–1323
 - changing appliance, 1323
 - complications prevention, 1324
 - continuing and transitional care, 1324
 - dietary and fluid needs, 1323
 - drainage from ileostomy, 1322
 - emotional support, 1322
 - irrigating colostomy, 1322
 - Nasogastric (NG) suction, 1322
 - patient education, 1324
 - skin and stoma care, 1323
 - preoperative care, 1321
- Immune function, preoperative assessments, 405
- Immune hemolytic anemias, 926–927
 - assessment and diagnostic findings, 926
 - clinical manifestations, 926
 - medical management, 926
 - nursing management, 926
- Immune response, 987
 - acquired, 988
 - cellular, 988
 - chemical barriers and, 988
 - complement-mediated, 988f
 - humoral, 991–993
 - natural, 988
 - physical surface barriers and, 989
 - regulation of, 989
 - stages of, 989
 - effector stage, 991
 - proliferation stage, 991
 - recognition stage, 991
 - response stage, 991
- Immune system, 987
 - anatomy of, 987–988
 - bone marrow, 987
 - lymphoid tissues, 987
 - assessment of, 996
 - allergies, 998
 - disorders and diseases, 998
 - gender, 996
 - health history, 996–1000
 - immunization, 998
 - infection, 998
 - lifestyle factors, 1000
 - medications and blood transfusions, 1000
 - nutrition, 997–998
 - older adults, 996–997
 - physical assessment, 1001
 - psychoneuroimmunologic factors, 1001
 - function of, 989
 - acquired immunity, 989
 - age-related changes in, 996t
 - cellular response, 992–994
 - complement System, 993
 - gender and, 996
 - humoral response, 988–990
 - immunomodulators, 994
 - natural immunity, 988
 - response to invasion, 989
 - nursing management, 1001–1002
- Immune thrombocytopenic purpura (ITP), 933–934
 - assessment and diagnostic findings, 933
 - clinical manifestations, 933
 - medical management, 932–933
 - nursing management, 933
 - pathophysiology, 933
 - primary, 933
- Immunotherapy
 - for allergic disorders, 1052–1053
 - epicutaneous, 1053
 - indications and contraindications, 1053c
 - subcutaneous, 1053
 - sublingual, 1053
- Induced abortion, 1665c
 - dilation and evacuation, 1665c
 - labor induction, 1665c
 - medical abortion, 1665c
 - medical management, 1665–1666
 - nursing management, 1666
 - patient education, 1666
 - psychological support, 1666
 - types of, 1665c
 - vacuum aspiration, 1665c
- Infections
 - after liver transplantation, 1410
 - cultures, 488
 - local signs of, 456
 - surgical site, 455
- Infertility, 1666
 - definition of, 1666
 - diagnostic findings, 1666
 - male factors in, 1666
 - medical management, 1667–1668
 - artificial insemination, 1667
 - assisted reproductive technologies, 1667
 - pharmacologic therapy, 1667
 - nursing management, 1668
 - ovarian and ovulation factors in, 1667
 - primary, 1666
 - secondary, 1666
 - tubal and uterine factors in, 1667
- Infiltration
 - assessment of, 268c
 - and extravasation, 268
- Inflammation, 1068
 - cellular injury in, 108–109
 - chemical mediators of, 108
 - healing, 109
 - regeneration, 109
 - replacement, 109
 - responses to, 108f
 - systemic response to, 108–109
 - types of, 109



- Inflammatory bowel disease (IBD), 1286
 Crohn's disease, 1305 (*See also* Crohn's disease)
 home care checklist, 1312c
 medical management, 1308–1310
 nutritional therapy, 1308–1309
 pharmacologic therapy, 1308
 nursing process, 1310–1312
 anxiety reduction, 1311
 assessment, 1310
 complications management, 1311
 continuing and transitional care, 1312–1313
 coping measures, 1311
 diagnosis, 1310
 elimination patterns, 1310
 evaluation, 1313
 fluid intake, 1311
 nursing interventions, 1316–1317
 nutrition therapy, 1311
 patient education, 1312
 planning and goals, 1316
 rest promotion, 1311
 skin breakdown prevention, 1311
 prevalence of, 1304
 surgical management, 1309–1310
 continent ileostomy, 1310
 indications for, 1309
 restorative proctocolectomy with IPAA, 1309
 total colectomy with ileostomy, 1309
 ulcerative colitis, 1305 (*See also* Ulcerative colitis)
- Informed consent
 definition of, 401c
 valid, 401c
- Inheritance patterns, 121–124
 autosomal dominant inheritance, 121–122
 autosomal recessive inheritance, 123
 complex genetic conditions, 124
 multifactorial inheritance, 124
 nontraditional inheritance, 124
 x-linked inheritance, 123
- Insulin, 1499
 complications, 1502
 intermediate-acting, 1500
 lipodystrophy, 1502
 local allergic reaction, 1502
 preparations, 1501t
 rapid-acting, 1501t
 regimens, 1502
 conventional, 1502
 intensive, 1502
 resistance, 1502
 and self-monitoring of blood glucose, 1497
 short-acting, 1500
 skin preparation, 1502
 Somogyi effect, 1502
 syringes, 1502
 systemic allergic reactions, 1502
 type 1 diabetes and, 1500
 type 2 diabetes and, 1499
 waning, 1502
 withdrawing, 1502
- Intestinal obstruction, 1302
 causes of, 1302
 functional/paralytic obstruction, 1302
 large bowel obstruction, 1304
 mechanical causes of, 1303t
 mechanical obstruction, 1302
 small bowel obstruction, 1303–1304
- Intra-abdominal injuries
 assessment and diagnostic findings, 2195
 genitourinary injury, 2195
 internal bleeding, 2195
 intraperitoneal injury, 2195
 management, 2195
- Intra-articular fractures, 1159
- Intracranial pressure (ICP), 2056
 increased, 1996–2009
 assessment, 2001
 complications, 2001
 management, 2001–2004
 manifestations, 2000
 monitoring of, 2001
 nursing process, 2004–2008
 pathophysiology, 2000
- Intracranial surgery
 home care check list, 2015c
 nursing process, 2012–2016
 postoperative management, 2011
 preoperative management, 2011
- Intraoperative phase, 397
 nursing activities in, 398c
 timing of, 397
- Intrauterine device (IUD), 1660
 hormonal, 1660
 nonhormonal, 1660
- Intravenous (IV) solutions therapy
 air embolism and, 267
 blood clots and, 269
 and bloodstream infections, 267
 complications of, 267–269
 hypertonic solutions, 266
 hypotonic solutions, 266
 isotonic solutions, 264–266
 nursing management of patient, 266–269
 patient education, 269
 self-care, 269
 transitional care, 269
 types of, 264–266
- Ionizing radiation
 carcinogenesis and, 304–305
 types of, 304
- Irinotecan, 321t
- IRIS. *See* Integrated Risk Information System
- Iron, 886
 absorption, 887
 overload, 903
 stores and metabolism, 887
 supplementation, 914
- Iron deficiency anemia, 914
 assessment and diagnostic findings, 914
 causes of, 914
 clinical manifestations, 914
 medical management, 914–915
 nursing management, 915–916
- Irritable bowel syndrome (IBS), 1286
 abdominal pain and, 1294
 assessment and diagnostic findings, 1293–1294
 clinical manifestations, 1293
 medical management, 1294–1295
 nursing management, 1295
 pathophysiology, 1293
- Ischemic stroke
 assessment, 2035–2036
 clinical manifestations, 2033
 medical management, 2036
 pathophysiology, 2032–2033
 risk factors, 2035c
 self care, 2029
- IV ibutilide, for atrial fibrillation, 701
- Ixabepilone, 321t
- Ixazomib, 977, 979t
- J**
- Jackson-Pratt drains, 1360, 1628
- Janus Kinase (JAK) inhibitors, 1072t, 1080
- Jaundice, 912
 gallbladder, 1371
 hemolytic, 1371
 hepatocellular, 1371
 obstructive, 1371–1372
- Jaw disorders, 1234
- Jejunostomy, 1249
- Jejunum, 1209, 1212
- Jet injectors, 1503
- Job syndrome. *See* Hyper-immunoglobulin E syndrome (HIES)
- Joint, 1099–1100
 age-related changes, 174
 amphiarthrosis, 1099
 capsule, 1100
 diarthrosis, 1100
 dislocations, 1154
 effusion, 1107
 function, assessment of, 1107
 internal derangement of, 1233
 space, 1122
 synarthrosis, 1099
- Joint arthroplasty, 1124, 1147
- Joint Commission, 28
 on anesthesia, 424–425
- Joint Commission National Patient Safety Goals, 2154
- Joint instability, 1888t
- J point*, 738
- Judaism, 90c
- Jugular venous distention (JVD), 797
- Junctional arrhythmias, 704–705
 atrioventricular nodal reentry tachycardia, 704–705, 705f
 junctional rhythm, 704
 nonparoxysmal junctional tachycardia, 704
 premature junctional complex, 704
- Junctional rhythm, 704
- Juxtaglomerular apparatus, 1536
- K**
- Kaposi sarcoma, 1022
- Kegel exercises, 1614c
- Keloids, 1852
- Keratin, 1799
- Keratinocytes, 1799
- Keratoconus, 1918
- Keratolytic ointment, 1120
- Keratoprosthesis, 1919
- Kernig sign, 2089, 2089f
- Keratoconjunctivitis sicca, 1085
- Ketamine, 217
- Ketoconazole, 1477
- Ketone bodies, 1366, 1490
- Ketones, 1497
- Ketorolac, 208
- Kidney and urinary systems, 1535, 1537, 1541
 diagnostic evaluation
 biopsy, 1552
 computed tomography, 1549–1550
 cystography, 1551
 intravenous pyelography, 1551
 kidneys, ureters, and bladder (KUB)
 x-ray, 1549



- magnetic resonance imaging, 1549
 MAG3 renogram, 1551
 nuclear scans, 1550
 nursing care plan, 1547
 osmolality, 1538
 renal angiography, 1551
 renal function tests, 1549, 1549t
 retrograde pyelography, 1551
 specific gravity, 1548
 ultrasonography, 1549
 urinalysis and urine culture, 1546
 urologic endoscopic procedures, 1551
 voiding cystourethrography, 1551
- function of
 acid-base balance, regulation of, 1539
 antidiuretic hormone, 1538
 bladder emptying, 1540
 blood pressure, autoregulation of, 1539
 electrolyte excretion, regulation of, 1538
 older adults and, 1540
 osmolality and osmolality, 1538
 prostaglandin secretion, 1539
 red blood cell production, regulation of, 1539
 renal clearance, 1539
 urine formation, 1537
 urine storage, 1540
 vitamin D synthesis, 1539
 waste products, excretion of, 1539
 water excretion, regulation of, 1538
- health history, 1541
- kidneys
 blood supply to, 1535
 functions of, 1535c
 nephrons, 1536
- physical assessment
 bladder, percussion of, 1545
 costovertebral angle, 1544f
 kidneys, palpation of, 1543
 vulva, urethral meatus, and vagina examination, 1545
- ureters, 1536–1537
 urethra, 1536–1537
 urinary bladder, 1536–1537
- Kidney biopsy, 1552
- Kidney disorders
 acute kidney injury, 1564–1570
 chronic kidney disease, 1555–1557
 end-stage kidney disease, 1570–1577
 fluid and electrolyte disturbances in, 1555
 nephrosclerosis, 1557–1558
 polycystic kidney disease, 1562
 primary glomerular diseases, 1558–1562
 renal cancer, 1562–1564
 and urinary disorders, 1544c
 risk factors for, 1541t
- Kidneys
 burn injuries and, 1866
 chemotherapy-related effects, 323
 functions, 230
 urine volume, 229
- Kidney surgery
 nursing care plan, 1593c–1594c
 nursing management
 complications management, 1595
 home, community-based, and transitional care, 1595–1596
 immediate postoperative care, 1592
 perioperative concerns, 1592
 postoperative management, 1592
 preoperative considerations, 1591–1592
- Kidney transplantation, 1596–1600
 acute rejection, 1598
 contraindications to, 1596
 hyperacute rejection, 1598
 kidney donation, 1597
 postoperative management, 1597–1600
 complications management, 1600
 home, community-based, and transitional care, 1600
 immunosuppressive agents, 1598
 infection prevention, 1599
 psychological concerns, addressing of, 1599–1600
 transplant rejection, assessment for, 1599
 urinary function, monitoring of, 1599
 preoperative management, 1596–1597
 medical management, 1596–1597
 nursing management, 1597
 psychosocial evaluation, 1597
- Killer T cells, 993
- King Tube, 2188, 2188f
- Kirsten ras (KRAS), 304
- Klebsiella pneumoniae*, 356
- Knowledge, skills, and attitudes (KSAs), 9
- Kock pouch, 1310
- Kupffer cells, 1365
- Kyphoscoliosis, 477, 672
- Kyphosis, 1096, 1105
- L**
- Labetalol, for hypertension, 874t
- Labia majora, 1641
- Labia minora, 1641
- Labor induction, 1665c
- Labyrinthitis, 1957
- Lactational abscess, 1717–1718
- Lactobacillus acidophilus*, 1677
- Lactose intolerance, 1032, 1136, 1295c, 1296t
- Lactulose, in hepatic encephalopathy, 1382
- Lamellae, 1098
- Laminar airflow units, 422
- Lamivudine (3TC), 1018t
- Langerhans cells, 1799
- Language, “people-first,” 145c
- Lanreotide, 1451
- Lansoprazole
 for gastritis, 1269t
 for gastroesophageal reflux disease (GERD), 1258t
- Laparoscopes, 420
- Laparoscopic cholecystectomy, 1421, 1422, 1424
- Laparoscopic cryomyolysis, 1693
- Laparoscopic myolysis, 1693
- Laparoscopic myomectomy, 1693
- Laparoscopic radical prostatectomy, 1756, 1762
- Laparoscopy, 1225, 1653–1654, 1654f
- Large bowel obstruction, 1304
 assessment and diagnostic findings, 1305
 clinical manifestations, 1304–1305
 medical management, 1305
 nursing management, 1305
 pathophysiology, 1304
- Large intestine, 1209
 anatomy and blood supply of, 1210f
- Laryngeal cancer, 514c
- Laryngeal mask airway (LMA), 420
- Laryngeal obstruction, 513–514
- Laryngectomy, 494, 515
- Laryngitis, 497, 507–509
- Larynx, anatomy, 464
- Laser ablation, 859
- Laser-assisted in situ keratomileusis, 1920, 1920f
- Laser hyperthermia, for hepatic metastases, 1406
- Lasers, risks of, 423
- Laser therapy, 580, 859
- L-asparaginase, 322
- Latent autoimmune diabetes of adults (LADA), 1488, 1491
- Latent reservoir, 1013
- Lateral collateral ligament (LCL), 1156
 injury, 1156
- Lateral epicondylitis, 1155
- Late-stage illness, 389
- Latex allergy, 1062–1064
 assessment and diagnostic findings, 1063
 clinical manifestations, 1062–1063
 medical management, 1063
 nursing management, 1064
- Latex condom, 1662
- Lavage, 1223, 1256
- Laxatives, 1336
- Leading Health Care Indicators (LHIs), 8
- Leaflet repair, 772, 773f
- Learning
 definition of, 58
 readiness, 59–60
- Ledipasvir-sofosbuvir, 1391
- Leflunomide, 1072t
- Left atrial appendage occlusion (LAAO), 700, 702–703
- Left-sided heart failure, 472, 484t, 796
- Left ventricular failure. *See* Left-sided heart failure
- Legal issues, end-of-life care and, 190
- Legg–Calvé–Perthes disease, 1126
- Legionella pneumophila*, 2175
- Legionnaires disease, 2175
- Leg ulcers, 854–858
 arterial ulcers, 855
 assessment and diagnostic findings, 855
 clinical manifestations, 854–855
 compression therapy, 855
 débridement, 855–856
 hyperbaric oxygenation, 857
 negative pressure wound therapy, 857
 nursing process, 857–858
 pathophysiology, 854
 pharmacologic therapy, 855
 stimulated healing, 856–857
 topical therapy, 856
 venous ulcers, 855
 wound dressings, 856
- Leiomyoma, 1692
- Lenalidomide, 963
- Lepirudin, for venous thromboembolism, 849t
- Leptin, 1345
- Lesbian, gay, bisexual, transgender, and queer (LGBTQ), 1011, 1649–1650, 1781
- Letrozole, 1734, 1734t
- Leukapheresis, 896t
- Leukemia, 951
 acute, 951
 lymphocytic leukemia, 956–957
 myeloid leukemia, 955–956



- Leukemia (*continued*)
 chronic, 957
 lymphocytic leukemia, 957–959
 myeloid leukemia, 955–956
 nursing process, 959–962
 assessment, 959
 diagnosis, 960
 evaluation, 962
 nursing interventions, 960–962
 planning and goals, 960
 Leukemia cutis, 953f
 Leukocyte adhesion deficiency (LAD), 1006t
 Leukocytes. *See* White blood cells (WBCs)
 Leukocytosis, 951
 Leukopenia, 891, 1025, 1084
 Leukoplakia, 1230t
 Leukopoor, 899
 Leukotriene modifiers, 637t
 Leukotrienes, 633, 1041
 Leuprolide, 1135, 1693
 Levalbuterol, 634
 Levator ani, 1642
 Level of consciousness (LOC), 1218, 1222
 Levin tube, 1063t
 Levocetirizine, 1051t
 Levodopa, 2124
 Levofloxacin
 in impetigo, 1835
 for urinary tract infections, 1608t
 Levothyroxine, 406t, 1457
 Leydig cell tumors, 1771
 LGBTQ. *See* Lesbian, gay, bisexual, transgender, and queer
 Lice infestation, 1838–1840
 Lichenification, 1808t
 definition of, 1819
 Lichen planus, 1231t
 Licox catheter system, 2003
 Lidocaine, 180t, 698t
 Lidocaine patches, 1166
 Li-Fraumeni syndrome, 129t
 Ligaments, 464, 1100
 Ligation and stripping, 859
 Lightning injuries, 1870c
 Liniments, 1819
 Lipase, 1210, 1217
 Lipid profiles, 1734
 Lipoatrophy, 1016, 1021f, 1502
 Lipohypertrophy, 1016, 1502
 Lipoproteins, 672
 atherosclerosis development and, 729f
 high-density, 727
 low-density, 727
 Liposomal therapy, for ovarian cancer, 1702
 Liposomes, 1702
 Lipotropin, 1450
 Lips, 1215
 Liraglutide, 1350t
 Lisinopril
 for heart failure, 800t
 for hypertension, 872t
 Lithotomy position, 435
 Lithotripsy, 1235, 1421, 1422
 Liver
 age-related changes in, 1457
 anatomy of, 1365–1366, 1365f
 assessment of, 1365–1369
 health history, 1367
 physical assessment, 1368–1369
 cancer of, 1404–1407
 dysfunction, 1404 (*See specific diseases*)
 enlargement, 1394
 functions of, 1366–1367
 ammonia conversion, 1366
 bile formation, 1366
 bilirubin excretion, 1366
 drug metabolism, 1367
 fat metabolism, 1366
 glucose metabolism, 1366
 protein metabolism, 1366
 vitamin and iron storage, 1366
 laboratory tests to assess function of, 1370t
 palpation of, 1394
 tenderness of, 1369
 Liver abscesses, 1412–1413
 amebic, 1412
 assessment and diagnostic findings, 1413
 clinical manifestations, 1413
 medical management, 1413
 nursing management, 1413
 pathophysiology, 1412
 pyogenic, 1412
 Liver biopsy, 1369
 Liver disease, 939
 Liver metastases, 1405–1407
 assessment and diagnostic findings, 1405
 clinical manifestations, 1405
 medical management, 1405
 chemotherapy, 1405–1406
 immunotherapy, 1406
 laser hyperthermia, 1406
 percutaneous biliary drainage, 1406
 radiation therapy, 1405
 transcatheter arterial embolization, 1406
 nursing management, 1407
 continuing and transitional care, 1407
 patient education, 1407
 surgical management, 1406–1407
 liver transplantation, 1406–1407
 lobectomy, 1406
 local ablation, 1406
 Liver transplantation, 1407–1412
 biliary anastomoses, 1408
 complications, 1409
 bleeding, 1409–1410
 infection, 1410
 Living donor liver transplantation (LDLT) procedure, 1410
 rejection, 1410
 end-stage liver disease and, 1408
 ethical issues related to, 1408
 immunosuppressive agents after, 1408
 indications for, 1408
 living donor, 1409
 Milan criteria, 1406
 Model for end-stage liver disease (MELD) score, 1408
 nursing management, 1410
 continuing and transitional care, 1412
 patient education, 1411–1412
 postoperative, 1411
 preoperative, 1411
 split-liver transplant, 1409
 surgical procedure, 1408–1412
 triple therapy, 1408
 Living arrangements, 176–178
 Living donor liver transplantation (LDLT), 1409
 Living ligature, 1642
 Living will, 29
 LMM. *See* Lentigo maligna melanoma
 Lobectomy, 581c
 Lobular carcinoma in situ (LCIS), 1719
 Lobules, liver, 1365
 Local adaptation syndrome, 101
 Local anesthesia, 313
 Local conduction blocks, 424, 429
 Locked-in syndrome, 1993
 Long-acting beta-2 adrenergic agonists (LABA), 616
 Long-acting muscarinic antagonists (LAMA), 616
 Long-acting reversible contraception (LARC), 1660
 intrauterine device, 1660
 implant, 1660
 Long-term care facilities, older adults and, 172
 Look Good Feel Better programs, 1241
 Loop diuretics, for hypertension, 872t
 Loop electrocautery excision procedure (LEEP), 1696
 Loose bodies, 1117
 Loperamide, 1291
 Lopinavir + ritonavir (LPV/r), 1019t
 Loratadine, 1051t
 Lorazepam, 381
 Lorcaserin, for obesity, 1350t
 Lordosis, 1105, 1106f
 Losartan
 for heart failure, 800t
 for hypertension, 872t
 Lotions, wound treatment, 1819–1820
 Low back pain, 1113–1117
 assessment and diagnostic findings, 1114
 causes of, 1113
 clinical manifestations, 1114
 diagnostic procedures for, 1114c
 medical management, 1114–1115
 nursing management, 1115–1117
 pathophysiology of, 1114
 preventing acute, 1116c
 Low-density lipoprotein (LDL), 727
 in coronary artery disease (CAD), 727
 Lower airway injuries, burn-related, 1872
 Lower motor neuron, 1976
 Lower respiratory tract disorders
 atelectasis, 527–530
 chest trauma, 589–598
 chest tumors, 577–589
 pneumoconiosis, 576–577
 respiratory infections, 495
 Low-molecular-weight heparin (LMWHs), 847
 for venous thromboembolism, 848t
 Low-profile gastrostomy devices (LPGDs), 1250
 Lubiprostone, 1290t, 1295
 Lumbar disc excision, 2138
 Lumbar disc herniations, 2136
 Lumbar puncture
 cerebrospinal fluid analysis and, 1990
 headache following, 1990
 Lumbar spine vertebrae, 2126f
 Lumbar support belts, in low back pain, 1115
 Lumen, 1219, 1244
 Lund and Browder method, 1868–1869
 Lung abscess, 551–552
 assessment, 552
 clinical manifestations, 552
 medical management, 552
 nursing management, 552
 pathophysiology, 551
 prevention, 552



- Lung cancer, 577–588
 metastasis, 579f
 radiation therapy, 585–588
 survival rates, 578t
- Lungs
 airway resistance, 466
 anatomy, 464–465
 capacity, 466
 compliance, 466
 lobes of, 464, 478c
 mechanoreceptors in, 470
 positioning, 464
 reduction, 581c
 volume, 466
- Lung scans, 490
- Lung transplantation, 618
- Lupus nephritis, 1083
- Luteal phase, 1644
- Luteinizing hormone (LH), 1449, 1643
- Luteinizing hormone–releasing hormone (LHRH) agonists, 1761
- Lyme disease, 708
 stages of, 2202
- Lymph, 818, 820
- Lymphadenitis, 860
- Lymphadenopathy, 953
- Lymphangitis, 860
- Lymphatic disorders, 860–861
- Lymphatic system, 818
- Lymphatic vessels, 819
- Lymphedema, 860–861
- Lymph node biopsy, 492
- Lymph nodes, 993, 996
- Lymphocytes, 916, 917, 930
- Lymphoid, 951
- Lymphoid stem cells, 889, 951
- Lymphoid tissues, 987
- Lymphokines, 993
- Lymphomas, 251
 AIDS-related, 1023
 classification of, 306t
 Hodgkin, 969–972
 non-Hodgkin, 972–974
- Lymphopenia, 930
- Lymphoscintigraphy, 826
- Lynch syndrome, 125, 1219. *See also* Colorectal cancer
- Lyric, 1959, 1960
- Lysergic acid diethylamide (LSD), 2214
- Lysis, 323
- M**
- Macrophages, 633, 726
- Macule, 1296
- Magic mouthwash, 1237
- Magnesium
 deficit, 252t
 excess, 252t
- Magnesium-based antacids, 253
- Magnesium-free dialysate, 254
- Magnesium hydroxide, 1290t
- Magnesium imbalance, 251–254
 hypermagnesemia, 253–254
 hypomagnesemia, 252–253
- Magnesium sulfate, in cardiopulmonary resuscitation, 814t
- Magnetic resonance angiography (MRA), 826
- Magnetic resonance–guided focused ultrasound surgery (MRgFUS), 1693
- Magnetic resonance imaging–guided core biopsy, of breast, 1715t
- Malabsorption, 350
- Malaria, 2176
- Male artificial urinary sphincter, 1615f
- Male breast, diseases of, 1739–1740
- Male condom, 1662
- Male reproductive system, 1744–1777
 age-related changes in, 1745t
 assessment
 BETTER model, 1746
 digital rectal examination, 1746
 health history, 1745–1746
 physical examination, 1746
 PLISSIT model, 1746
 testicular self-examination, 1772c
 diagnostic evaluation, 1747
 prostate fluid or tissue analysis, 1747
 prostate-specific antigen test, 1747
 tests of male sexual function, 1747
 ultrasonography, 1747
 disorders of, 1751–1752
 circumcision, 1775
 ejaculation, disorders of, 1751–1752
 epididymitis, 1770
 erectile dysfunction, 1747–1751
 genetic factors in, 1751c
 hydrocele, 1774
 orchitis, 1769–1770
 penile cancer, 1775–1776
 Peyronie's disease, 1777
 phimosis, 1775
 priapism, 1776
 prostatic disorders, 1752–1769
 sexually transmitted infections, 1752
 testicular cancer, 1771–1774
 testicular torsion, 1770–1771
 urethral stricture, 1777
 varicocele, 1774
 structures of, 1744f
- Male sterilization. *See* Vasectomy
- Malignant bone tumors, 1146
- Malignant cells, characteristics of, 308
- Malignant, definition of, 303
- Malignant hyperthermia, 432–435
- Malignant Hyperthermia Association of the United States (MHAUS), 432
- Malignant skin tumors, 1852
 basal cell carcinoma, 1852
 melanoma, 1855–1859
 squamous cell carcinoma, 1852
- Malunion, 1164
- Mammography, 1713
- Mammoplasty
 augmentation, 1739
 mastopexy, 1739
 reduction, 1739
- Mandibular fractures, 1234
- Manual traction, 1159, 1175
- Maraviroc (MVC), 1020t
- Marburg virus, 2147t
- Marshall–Bonney maneuver, 1546
- Marsupialization, 1691
- Masks, 421
- Maslow hierarchy of needs, 6
- Mass casualty incident (MCI), 2219
 triage categories, 2223t
- MAST. *See* Michigan Alcohol Screening Test
- Mastalgia (breast pain), 1718
- Mast cells, 108, 296
- Mast cell stabilizers, for allergic rhinitis, 1051–1052
- Mastectomy, 1722
- Mastitis, 1717
- Mastoidectomy, 1950
- Mastopexy, 1739
- Material safety data sheet (MSDS), 2227
- Maximal voluntary ventilation, 486t
- MDS. *See* Myelodysplastic syndromes
- Mean arterial pressure (MAP), 275
- Measles, mumps and rubella (MMR) vaccine, 2156
- Measures Application Partnership (MAP), 275
- Mechanical ventilation, 559–563
 classification, 559–561
 indications, 559, 560c
 troubleshooting problems, 564t
 ventilator modes, 561–562
- Medial collateral ligament (MCL), injury to, 1156
- Medial epicondylitis, 1154, 1155
- Mediastinal tumors, 588, 589
- Mediastinoscopy, 492, 493
- Mediastinum, 465
- Mediating process, 99
- Medicaid
 older adults and, 189
 reimbursement by, 52
- Medical abortion, 1665, 1666
- Medical nutrition therapy (MNT), 1493
- Medical-surgical nursing, 24
- Medicare, 371, 372
- Medicare Hospice Benefit, definition of, 373
- Medications
 analgesic, 208–218
 to control postoperative nausea and vomiting, 441t
 drug interactions, 549t
 intravenous, 426t
 ocular, 1907–1909
 over-the-counter, 658
 preanesthetic, 413
 prescriptions, 76
- Mediterranean Diet, 730
- MedPAC. *See* Medicare Payment Advisory Commission
- Medroxyprogesterone, 1135
- Medullary depression, 424
- Megacolon, 1307
- Megakaryocytes, 890
- Megaloblastic anemia, 917–919
 clinical manifestations, 918
 folic acid deficiency and, 917
 medical management, 918
 nursing management, 918–919
 vitamin B₁₂ deficiency and, 917–918
- Megaloblasts, 888
- Megestrol acetate, 1025
- MEI. *See* Middle ear implantation
- Meiosis, 120
- Melanin, 1799
- Melanocytes, 1799
- Melanocyte-stimulating hormone, 1799
- Melanomas, 1855
- Melena, 912
- Melphalan, 321t
- Membranous labyrinth, 1937
- Memory, 178
- Memory cells, 993
- Menarche, 1655
- Ménière disease
 definition of, 1953
 dietary guidelines, 1954c
- Meningeal infections, 2089



- Meningeal irritation, 2089, 2089f
 Meninges, 1969
 arachnoid, 1969, 1969f, 1970
 dura mater, 1969–1970, 1969f
 pia mater, 1969, 1969f, 1970
 Meningiomas, 2114
 Meningitis
 cerebrospinal fluid values diagnostic, 2090t
 clinical manifestations, 2089
 gonococcal, 2171
 pathophysiology, 2089
 Meningococcus, vaccination, 2151
 Meniscal injuries, 1157
 Menisci, 1154
 injuries to, 1154–1157
 Menopause, 1671–1673
 clinical manifestations, 1671–1672
 definition of, 1671
 health promotion strategies, 1672c
 medical management, 1672
 behavioral strategies, 1673
 bone health, 1673
 cardiovascular health, 1673
 hormone therapy, 1672–1673
 hot flashes and, 1673
 nutritional therapy, 1673
 nursing management, 1673
 postmenopausal bleeding, 1671
 psychological considerations, 1672
 Menorrhagia, 1658
 Menotropins, 1667c
 Menstrual cycle, 1643–1644
 hormonal changes during, 1644t
 Menstruation
 cultural considerations, 1656
 psychosocial considerations, 1655–1656
 Mental health, 142, 143
 of older adults, 180–186
 Mental health disabilities, communicating with
 people having, 149c
 Mental status, 664
 Meperidine, 214
 Mephedrone, 2205
 Mercaptans, 1381
 6-Mercaptopurine, 321t
 Merkel cells, 1799
 Meshed graft, split-thickness, 1882f
 Metabolic acidosis, end-stage kidney disease
 and, 1570
 Metabolic bone disorders, 1134–1142
 osteomalacia, 1140–1141
 osteoporosis, 1134–1140
 Paget disease, 1141–1142
 Metabolic syndrome, 727
¹³¹I-metaiodobenzylguanidine (MIBG)
 scintigraphy, 1475
 Metanephrine (MN), 1475
 Metaplasia, definition of, 97
 Metaproterenol sulfate, 635t
 Metastasis, definition of, 303
 Metastatic bone disease, 1146
 Metastatic skin tumors, 1859
 Metformin, 1692
 Metformin with glyburide, 1505t
 Methadone, 214
 Methicillin-resistant *Staphylococcus aureus*
 (MRSA), 533, 1126
 description of, 2154–2155
 Methimazole, 1463
 for hyperthyroidism, 1464t
 Methohexital sodium, 427t
 Methotrexate, 320, 321t
 Methylcellulose, 1290t
 Methyl dopa
 for hypertension, 874t
 3,4-methylenedioxymethamphetamine
 (MDMA), 2205
 3,4-methylenedioxypropylvalerone (MDPV), 2205
 Methylprednisolone, 635t
 Methyl tertiary butyl ether, 1423
 Methylxanthines, 935c
 Metoclopramide, 441t
 for gastroesophageal reflux disease (GERD),
 1258t
 Metocurine, 427t
 Metolazone
 for heart failure, 800t
 for hypertension, 872t
 Metoprolol, 698t
 for angina, 734t
 for hypertension, 873t
 Metoprolol, 698t
 Metronidazole,
 for bacterial vaginosis, 1679
 for gastritis, 1269t
 Metropolitan Medical Response Teams
 Systems, 2220
 Metrorrhagia, 1658
 MEWS. See Modified Early Warning System
 Michigan Quality Improvement Consortium
 (MQIC), 1115
 Miconazole, for candidiasis, 1678
 Microalbuminuria, 1522
 Microbicides, 1011
 Microbiome, 1212
 Microbiota, 1212
 Micrographia, 2124
 Microhemagglutination test for *Treponema*
 pallidum (MHA-TP), 2169
 Micropapillary invasive ductal carcinoma, 1720
 Micturition, 1537
 Midazolam, 427t
 Middle ear
 anatomy of, 1937
 conditions of, 1948–1952
 endoscopy, 1943
 masses of, 1939
 Middle ear implant (MEI), 1960
 Mifepristone
 for abortion, 1665c
 for fibroids, 1693
 Miglitol, 1505t
 Migraine, 2026
 headache, 2027
 phases, 2027
 types, 2027
 Milk thistle (*Silybum marianum*), 1395
 Miller–Fisher variant, 2103
 Milrinone, 803
 Mineralocorticoids, 1474
 Mineral oil, 1290t
 Minimally conscious state, 1993
 Minimally invasive surgery, 396
 Mini-Mental State Examination (MMSE), 178
 Minocycline, 1058
 Minorities, 73, 76
 Minoxidil, for hypertension, 874t
 Minute ventilation, 485
 Mirtazapine, 181
 Misoprostol
 for abortion, 1665c
 for gastritis, 1269t
 Mithramycin, 251
 Mitomycin, 323, 324
 Mitomycin C, 324
 Mitosis, 120
 Mitotic spindle inhibitors, 321t
 Mitoxantrone, 2097
 Mitral (apical) area, 668f
 Mitral valve
 prolapse, 766–767
 regurgitation, 767–768
 stenosis, 768
 Mitral valve prolapse, 766–767
 assessment of, 767
 clinical manifestations of, 767
 diagnostic findings of, 767
 medical management of, 767
 nursing management of, 767
 pathophysiology of, 767
 Mitrofanoff umbilical appendicovesicostomy,
 1620
 Mivacurium, 426t
 Mixed pain, 199t
 Mixed urinary incontinence, 1612. *See also*
 Urinary incontinence
 MLM. *See* Mucosal lentiginous melanoma
 Model for End-Stage Liver Disease (MELD)
 classification, 1408
 Moderate sedation, 429
 description of, 429
 patient monitoring in, 429–430
 Modified Early Warning System (MEWS), 295
 Modified radical mastectomy, 1723
 MODS. *See* Multiple organ dysfunction
 syndrome
 Moexipril, for hypertension, 872t
 Mohs micrographic surgery, 1853, 1854
 Moisture
 retentive dressings, 1817–1818
 skin, 1816
 Moisture-retentive dressings, 1817–1818
 calcium alginates, 1818
 foam dressings, 1818
 hydrocolloids, 1818
 hydrogels, 1818
 Molecular adsorbent recirculating system
 (MARS), 1393
 Moles, 1852
 Molluscum contagiosum, 1024
 Molotov cocktail, 2231
 Mondor disease, 1719
 Moniliasis, 1230t
 Monitored anesthesia care (MAC), 416, 430
 Monoclonal antibodies (MoAbs), 330–331
 cancer vaccines, 331–332
 chimeric, 332
 cytokines, 332
 human, 330
 hybridomas, 330, 330f
 production of, 330
 Monoclonal gammopathy of undetermined
 significance (MGUS), 957, 975
 Monoclonal protein, 974
 Monocytes, 884, 889
 Mononuclear leukocytes. *See* Monocytes
 Monotherapy, 645
 Monroe–Kellie hypothesis, 1993, 2000
 Montelukast, 1052, 1052t
 Moral dilemmas, 25
 Moral distress, 25
 Moral integrity, 28
 Moral problems, 25



- Moral uncertainty, 25
Morbidity and Mortality Weekly Report (MMWR), 2149
 Morning hyperglycemia, 1502
 Morphine, 211t, 212
 characteristics of, 213t
 Morphine-3-glucuronide (M3G), 213
 Morphine-6-glucuronide (M6G), 213
 Morphine sulfate (MS), 426t
 Morton neuroma, 1121
 Motion sickness, 1953
 Motivation, 58
 Motor dysfunction, 269, 2033
 Motor pathways, 1975–1977
 Motor system, examination of, 1980–1981
 Mourning
 after death, 384–385
 anticipatory, 384–385
 assessment of, 383c
 complicated, 384
 definition of, 384
 loss and, 385
 six processes of, 385
 Mouth care, 1232, 1236
 MRI. *See* Magnetic Resonance Imaging
 MRSA. *See* Methicillin-resistant *Staphylococcus aureus*
 MSDS. *See* Material safety data sheets
 Mucositis, 318
 chemotherapy agents and, 320
 definition of, 318
 Mucus hypersecretion, 633
 Multidetector-computed tomography (MDCT), 825
 Multidetector CT (MDCT), 679
 Multidisciplinary action plans (MAPs), 9
 Multidrug-resistant organisms (MDROs), 1005
 Multifactorial inheritance, 124
 Multimodal analgesia, 197, 206–218
 Multiple chronic conditions (MCC), 141, 155–156
 Multiple endocrine neoplasia, 129t
 Multiple myeloma, 974–981
 assessment and diagnostic findings, 975–976
 clinical manifestations, 975
 complications management, 977–979
 CRAB features, 975
 medical management, 976–977
 nursing management, 980–981
 older adults and, 980
 pathophysiology, 974–975
 and peripheral neuropathy, 980
 Multiple organ dysfunction syndrome (MODS), 297–298
 burn injuries and, 1874
 clinical manifestations of, 297–298
 medical management, 298
 nursing management, 298
 pathophysiology of, 297
 Multiple sclerosis (MS), 2094
 home care checklist, 2100c
 predictors of fatigue, 2098
 signs and symptoms of, 2095
 Multiple-test dipstick, 1548, 1607
 Multiple trauma, 2192–2193
 assessment and diagnostic findings, 2192
 causes of, 2192
 management, 2192–2193
 Mupirocin
 in impetigo, 1835
 Murmurs, 670
 characteristics of, 671c
 Muscle, 1118
 actions, 1101
 antagonists, 1101
 atrophy, 1097
 contraction, 1101
 cramps, 1104
 exercise and disuse, 1191c
 hypertrophy, 574
 skeletal, 1100
 strength and size, 1108
 synergists, 1101
 tone, 1101
 Muscle relaxants
 depolarizing, 426t
 nondepolarizing, 426t–427t
 Muscle setting exercises, 1169, 1169c
 Muscular dystrophies, 2132–2133
 Musculoskeletal disorders, 1113–1148
 bone tumors, 1145–1148
 foot problems, 1119–1122
 low back pain, 1113–1117
 metabolic bone disorders, 1134–1142
 musculoskeletal infections, 1142–1145
 upper extremity disorders, 1117–1119
 Musculoskeletal infections, 1142–1144
 osteomyelitis, 1142–1143
 septic (infectious) arthritis, 1145
 Musculoskeletal sports injuries, 1194t
 Musculoskeletal system, 1097–1112
 age-related changes of, 1103t
 assessment, 1101
 diagnostic evaluation
 arthrocentesis, 1111
 arthrography, 1110
 arthroscopy, 1110–1111
 biopsy, 1111
 bone densitometry, 1110
 bone scan, 1110
 computed tomography, 1109
 electromyography, 1111
 laboratory studies, 1111–1112
 magnetic resonance imaging, 1109–1110
 x-rays studies, 1108
 health history, 1104
 altered sensations, 1104
 common symptoms, 1104–1105
 pain, 1104
 past health, social, and family history, 1104
 physical assessment, 1105–1108
 bone integrity, 1106–1107
 gait, 1106
 joint function, 1107–1108
 muscle strength and size, 1108
 neurovascular status, 1108
 posture, 1105–1106
 skin, 1108
 structure and function of, 1099–1100
 articular system, 1099–1100
 skeletal muscle system, 1100–1101
 skeletal system, 1097–1098
 Musculoskeletal trauma
 amputation, 1193–1195
 clavicle, 1178–1179
 contusions, strains, and sprains, 1153
 elbow, 1180
 femoral shaft, 1186, 1191
 fibula, 1192
 fractures, 1178–1186
 hand, 1181
 hip, 1183–1184
 humeral neck, 1179
 humeral shaft, 1179–1180
 joint dislocations, 1154
 ligaments, injury to, 1154–1157
 menisci, injury to, 1154–1157
 occupation-related, 1193
 pelvis, 1181–1183
 radial and ulnar shafts, 1181
 radial head, 1180
 rib, 1192
 sports-related, 1193
 tendons, injury to, 1154–1157
 thoracolumbar spine, 1193
 tibia, 1192
 wrist, 1181
 Myasthenia gravis, 1968, 2100–2103
Mycobacterium avium complex (MAC) disease, 1021
 Mycophenolate mofetil, 1408, 1598
 Mycophenolic acid, 1598t
Mycoplasma pneumoniae, 537t
 Mycotic aneurysms, 838
 Mydriatics, 1908, 1908t
 Myelin, 2103
 Myelodysplastic syndromes (MDS), 962–965
 assessment and diagnostic findings, 963
 clinical manifestations, 963
 medical management, 963–964
 nursing management, 964–965
 Myelofibrosis, 965, 966, 966t
 Myelogram, for low back pain, 1114c
 Myeloid, 885
 Myeloid stem cells, 885, 887
 Myelomas, classification of, 306t
 Myelopoiesis, 889
 Myeloproliferative neoplasms
 essential thrombocythemia, 967–968
 polycythemia vera, 965–967
 primary myelofibrosis, 968–969
 Myelosuppression, 323
 Myocardial infarction (MI), 737–745
 assessment of, 738–740
 cardiac rehabilitation, 741
 clinical manifestations, 738
 definition of, 737
 diagnosis of, 738–740
 electrocardiogram, 738–739
 evaluation, 745
 health promotion, 745c
 medical management, 740–741
 nursing care, 743c–744c
 nursing interventions, 742–745
 pathophysiology, 737–738
 Myocardial perfusion, 653, 678
 Myocarditis, 787–788
 Myofascial pain, 1233
 Myoglobin, 739–740
 Myoglobulin, 1101
 Myomas, 1692
 Myomectomy, 1693
 Myopia, 1903f
 Myotonic muscular dystrophy type 1, 128t
 MyPlate Food Guide, 1495
 Myringotomy, 1949
 Myxedema, 1460
N
 Nabothian (retention) cysts, 1651
 N-acetylcysteine, 1392



- Nadir, definition of, 355
 Nadolol
 for hypertension, 873t
 for variceal bleeding, 1380t
 Nafarelin acetate, 1667c
 Nails, 1800
 clubbing of, 1809
 cuticle, 1800
 growth, 1800
 inspection, 1809
 Nalbuphine, 215
 Naltrexone/bupropion, for obesity, 1350t
 NANDA International (NANDA-I), 15
 Nanoparticle albumin-bound paclitaxel, 1439
 Nasal cavity, 464f
 Nasal corticosteroids, 500t
 Nasal endotracheal catheter, 425f
 Nasal fractures, 513
 Nasal obstruction, 512–513
 Nasoduodenal tube, 1246
 Nasoenteric tube, 1245f
 Nasogastric (NG) tube, 1241, 1245
 Nasojejunal tube, 1246, 2046
 NASPE-BPEG code. *See* North American Society of Pacing and Electrophysiology and the British Pacing and Electrophysiology Group code
 Nateglinide, 1505t
 National Association of Orthopaedic Nurses (NAON), 1193
 National Center for Complementary and Integrative Health (NCCIH), 77, 335
 National Center for Health Statistics (NCHS), 157
 National Cholesterol Education Program (NCEP), 730
 National Comprehensive Cancer Network (NCCN), 308
 National Consensus Project for Quality Palliative Care, 368
 National Disaster Medical System, 2220t
 National Health and Nutrition Examination Survey (NHANES), 866
 National Health Security Strategy, 2219
 National Heart, Lung, and Blood Institute (NHLBI), 719
National HIV/AIDS Strategy for the United States: Updated to 2020, 1008
 National Hospice and Palliative Care Organization (NHPCO), 369
 National Human Trafficking Hotline, 2213
 National Incident Management System (NIMS), 2219
 National Institute for Occupational Safety and Health (NIOSH), 306, 1944
 National Institute of Health (NIH), 117
 National Institute of Neurological Disorders and Stroke (NINDS), 1165
 National Institute on Deafness and Other Communication Disorders (NIDCD), 1944
 National Institute on Drug Abuse, 212
 National Institutes of Health Stroke Scale (NIHSS), 2036
 National Medical Response Teams for Weapons of Mass Destruction (NMRT), 2220t
 National Patient Safety Goals (NPSGs), 399, 411
 National Sexual Assault Hotline, 2212, 2213
 National Terrorism Advisory System (NTAS), 2219
 Natriuretic peptides, 232
 Natural disasters, 2180, 2183, 2229–2230
 preparedness and response, 2227
 Natural immunity, 988
 Natural killer (NK) cells, 889
 Nausea and vomiting
 intraoperative period, 431
 NCCIH. *See* National Center for Complementary and Integrative Health
 NCCN. *See* National Comprehensive Cancer Network
 Nebivolol, for hypertension, 873t
 Neck dissection, 1238–1244
 and chyle fistula, 1240
 and hemorrhage, 1242–1243
 lymphatic drainage of head and neck, 1239f
 and nerve injury, 1243
 nursing process
 airway clearance, 1240
 assessment, 1239
 communication methods, 1241
 complications management, 1242–1243
 continuing and transitional care, 1244
 diagnosis, 1239–1240
 evaluation, 1244
 home care checklist, 1243c
 nursing interventions, 1240–1244
 nutritional status, 1240–1241
 pain relief, 1240
 patient education, 1243
 physical mobility, 1242
 planning and goals, 1240
 postoperative care, 1240
 preoperative patient education, 1240
 rehabilitation exercises, 1242f
 supporting patient and caregivers, 1241
 wound care, 1240
 radical, 1238
 reconstructive techniques, 1239
 selective, 1239
 Neck immobility, 2089
 Necrotizing gingivitis, 1231t
 Necrotizing pancreatitis, 1429. *See also* Pancreatitis
 Needle biopsy, 313
 Negative feedback, 97
 definition of, 104
 Negative-pressure (vacuum) devices, 1749t, 1751
 Negative pressure wound therapy, 857
 Neglect, elder, 189
Neisseria gonorrhoeae, 2169
Neisseria meningitidis, 2088
 Nelfinavir (NFV), 1020t
 Neomycin, in hepatic encephalopathy, 1382
 Neoplasia, definition of, 302
 Neoplastic disease, 998–999
 Neovascularization, 1922
 Nephrectomy, 1563
 Nephritic syndrome, acute, 1558–1560
 Nephritis, 1083
 Nephrolithiasis, 1620–1625
 assessment and diagnostic findings, 1621
 clinical manifestations, 1621
 interventional procedures, 1622–1624
 medical management, 1621–1624
 nutritional therapy, 1622
 nursing process, 1624–1625
 assessment, 1624
 diagnosis, 1624
 evaluation, 1625
 home, community-based, and transitional care, 1625
 nursing interventions, 1624
 planning and goals, 1624
 pathophysiology, 1620–1621
 predisposing factors, 1621
 surgical management, 1624
 Nephrons, 1535
 Nephropathy, 1522–1523
 assessment and diagnostic findings, 1522–1523
 clinical manifestations, 1522
 diabetes and, 1522
 management, 1523
 Nephrosclerosis, 1555, 1557–1558
 benign, 1558
 treatment of, 1558
 Nephrotic syndrome, 1555, 1561–1562
 assessment and diagnostic findings, 1561–1562
 clinical manifestations, 1561
 complications, 1562
 and edema, 1561
 medical management, 1562
 nursing management, 1562
 pathophysiology, 1561, 1561f
 Nephrotoxic, 1566
 Nerve agents, 2236
 clinical manifestations of, 2236
 treatment of, 2236
 Neuraxial analgesia, 207
 Neurodegenerative, 1023, 2122
 Neuroendocrine tumors (NETs), 1442
 Neurofibromatosis, 1852
 Neurogenic bladder
 flaccid bladder, 1617
 spastic bladder, 1617
 Neurogenic shock
 description of, 296
 medical management, 296
 nursing management, 296
 risk factors, 292c
 Neuroimaging, 2091, 2092
 Neurologic assessment alerts, 2092
 Neurologic disorders
 critical care flowsheet, 2006f
 genetics of, 1979c
 symptoms of, 1977–1978
 Neuromodulation, 1614c
 Neuromuscular blockers, 424
 Neuromuscular respiratory failure, 2102
 Neuropathic pain, 201–202
 classification of, 199t
 definition of, 198
 mechanisms, 202
 pathways, 200f
 Neuropathy, 1493
 Neuropeptide Y (NPY), 1345
 Neuroplasticity, 197, 202
 Neurotransmitters, 1967, 1967t
 Neurovascular status, 1108
 Neutropenia, 929–930
 causes of, 929c
 clinical manifestations, 929
 definition of, 302
 medical management, 930
 nursing management, 930
 Neutrophils, 989
 Nevirapine (NVP), 1019t



- NHL. See Non-Hodgkin lymphomas
 NHPCO. See National Hospice and Palliative Care Organization
 NIC. See Nursing Interventions Classification
 Nicardipine
 for hypertension, 872t
 for pheochromocytoma, 1476
 Nicotine stomatitis, 1231t
 NIDCD. See National Institute on Deafness and Other Communication Disorders
 Nifedipine long acting
 for hypertension, 872t
 Nightingale, Florence, 5
 NIH. See National Institute of Health
 Nikolsky's sign, 1867
 Nilotinib, 955
 NIOSH. See National Institute for Occupational Safety and Health
 Nipple discharge, 1717
 Nipple inversion, 1710, 1711c
 Nisoldipine, for hypertension, 872t
 Nissen fundoplication, 1257
 Nitrates, for angina, 734t
 Nitrofurantoin, for urinary tract infections, 1608t
 Nitrogen mustard, 321t
 Nitroprusside, 285t
 Nitrosoureas, 321t
 Nitrous oxide, 425t
 Nivolumab, 1856
 Nizatidine, for gastritis, 1269t
 NM. See Nodular melanoma
 N-methyl-D-aspartate (NMDA) receptor antagonist, 201
 NOC. See Nursing Outcomes Classification
 Nociception
 modulation of, 200f
 perception of, 200f
 transduction of, 200f
 transmission of, 200f
 Nociceptive pain, 198–201
 classification of, 199t
 description of, 198–199
 transduction of, 199–201
 transmission of, 201
 Nociceptors, 199
 Nocturia, 661
 Nocturnal penile tumescence tests, 1747, 1748
 Nodular goiter, 1467
 Nodule, 1746
 Nonalcoholic fatty liver disease (NAFLD), 1368
 Nonalcoholic steatohepatitis (NASH), 1368
 Nonbullous impetigo, 1835
 Noncompensatory pause, 688
 Noncompliance, 798
 Nondepressed skull fractures, 2057
 Nondisjunction, 120
 Nonfatal drowning, 2199–2200
 management, 2199–2200
 Nongerminal tumors, 1771
 Non-Hodgkin lymphomas (NHL), 972–974
 assessment and diagnostic findings, 973
 classification system, 973
 clinical manifestations, 973
 extranodal location, 972f
 medical management, 973–974
 nursing management, 974
 Nonmaleficence, 25c
 Non-nucleoside reverse transcriptase inhibitors, 1016, 1019t
 Nonnutritive sweeteners, 1496
 Nonopioid analgesics, 199
 administration of, 208
 adverse effects of, 208–209
 in skeletal traction, 1176
 Nonparoxysmal junctional tachycardia, 704
 Nonrebreathing mask, 613
 Nonselective débridement, 856
 Nonseminoma testicular cancers, 1771
 Non-sulfonylurea insulin secretagogues, 1505t
 Nontraditional inheritance, 124
 Nontreponemal or reagin tests, 2169
 Nonunion, 1152, 1164
 Norepinephrine, 795
 in cardiopulmonary resuscitation, 814t
 Norethindrone acetate, 1694
 Normal flora, 2148
 Normal heart sounds, 650, 668
 Normal saline (NS), in diabetic ketoacidosis, 1515
 Normochromic, normocytic anemia, 916
 North American Society of Pacing and Electrophysiology and the British Pacing and Electrophysiology Group code (NASPE-BPEG code), 716c
 Nortriptyline, 217
 Nose
 anatomy of, 463
 physical assessment, 476
 Nosebleed. See Epistaxis
 Nothing-by-mouth (NPO), 535t
 NPH insulin, 1500
 NPSGs. See National Patient Safety Goals
 NSAID-induced kidney disease, 1567
 NSAIDs. See Nonsteroidal anti-inflammatory drugs
 Nuchal rigidity, 494, 501
 Nuclear radiation exposure, 2237–2239
 acute radiation syndrome, 2238–2239
 decontamination, 2238
 exposure, 2238
 measurement and detection, 2237–2238
 radiation, types of, 2237
 survival, 2239
 Nucleated RBCs, 968
 Nucleic acid amplification tests (NAATs), 2169
 Nucleic acid sequence–based amplification (NAT), 1015–1016
 Nucleoside reverse transcriptase inhibitors (NRTIs), 1018t
 Null lymphocytes, 993
 Numeric Rating Scale (NRS), 204
 Nurse navigators, 35
 Nursing Outcomes Classification (NOC), 17, 18c
 Nursing process, 12–23
 definition of, 12
 documentation of outcomes, 19
 example of plan of nursing care, 20c–22c
 hospitalized postoperative patient, 444–445
 steps of, 12–19
 assessment, 13–15
 diagnosis, 15–16
 evaluation, 19
 implementation, 17–19
 planning, 16–17
 taxonomy of nursing practice, 23
 Nutritional therapy
 ascites, 1373
 Nutrition labels, 783, 1495
 Nutritive sweeteners, 1496
 Nystagmus
 definition of, 1953
 Nystatin, for candidiasis, 1678
- O**
- OA. See Osteoarthritis
 Obesity, 1342
 android, 1346, 1348f
 assessment and diagnostic findings, 1345–1347
 body mass index, 1345, 1347f, 1347t
 waist circumferences, 1346
 waist-to-hip ratio, 1346
 definition of, 1342
 diseases/disorders associated with, 1344c, 1344f
 economic burden of, 1343
 emergency nursing and, 2185
 epidemiology of, 1343
 and foot problems, 1119
 gynoid, 1346, 1348f
 lifestyle modification for, 1347–1349, 1348c
 caloric dietary intake, decreasing, 1348
 healthy eating strategies, 1349c
 healthy sleep habits, 1349
 physical activity, increasing, 1348
 medical management, 1347–1351
 medications associated with, 1346c
 nonsurgical interventions for, 1349–1351
 intra gastric balloon therapy, 1351
 vagal blocking, 1351
 nursing management, 1352–1353
 in older adults, 1351
 pathophysiology, 1344–1345
 pharmacologic therapy for, 1349, 1350t
 pressure injury and, 1354
 prevalence of, 1343, 1343f
 surgical management, 1354–1355
 and nursing process, 1355–1360
 Obesity hypoventilation syndrome, 1352
 Obesogenic, 1344
 Obstructive jaundice, 1371–1372
 Obstructive sleep apnea (OSA), 510–511
 Occlusive dressings, 1817
 Occupational and Safety Health Administration (OSHA), 326
 Occupational Safety and Health Act (OSHA), 306
 Occupation-related musculoskeletal disorder, 1193
 Octreotide, 1273
 Odynophagia, 506
 Office of Emergency Management (OEM), 2220
 Office of Emergency Services (OES), 2220
 Office of Inspector General (OIG), 371
 Off-pump coronary artery bypass (OPCAB) surgery, 750, 750f
 Ointments, wound care, 1874
 Olanzapine, 1346t
 Older adults
 altered drug responses in, 180t
 body tissues of, 418
 chronic health conditions of, 167f
 genetic concepts and, 169c
 genitourinary disorders, 172
 health care needs of, 7
 health status of, 177
 intraoperative period, 418
 legal issues affecting, 190–191
 liver, changes in, 1367, 1367c



- Older adults (*continued*)
 medication regimens, 180
 mental health problems in, 180–186
 delirium, 182
 dementia, 186
 depression, 181
 substance abuse, 181
 MyPlate for, 174f
 nursing care of, 168
 oral conditions in, 1232c
 postoperative care for, 441
 preoperative assessment for, 410c
 pseudobulbar affect in, 2017
 sexual function in, 172
 sleep complaints in, 173–174
 smoking in, 171
 social services for, 189
 upper respiratory tract disorders, 495c
 urinary incontinence, 187–188
 vaccinations, 188
- Older Americans Act, 189
- Oligodendroglial tumors, 2113
- Oliguria, 234, 245, 432, 440, 448, 805
- Olmesartan, 872t
- Omalizumab, 638t, 639
- Ombitasvir-paritaprevir-ritonavir with dasabuvir, 1391
- Omega-3-acid ethyl esters, 803
- Omentum, 1276
- Oncotic pressure, 227, 282
- Ondansetron, 215
- On Death and Dying*, 388
- Oophorectomy, 1694
- Open fractures, 1180
- Opening snap, heart sounds, 670
- Open lung biopsy, 553
- Open reduction with internal fixation (ORIF), 1139, 1147
- Opioid analgesics, 209–210
 addiction, 211
 administration of, 210
 dual-mechanism of, 214
 equianalgesic dose chart for, 211t
 in skeletal traction, 1176
 tolerance, 211
- Opioid dose-sparing effect, 207
- Opioid-induced hyperalgesia (OIH), 212
- Opioid naïve, 207
- Opportunistic infections, 1007
- Opposition, 41c
- Oponization, 992
- Optical coherence tomography, 1902
- Oral cancers, 1235–1236
 alcohol and tobacco use and, 1235
 clinical manifestations, 1235
 diagnostic evaluation, 1236
 Human papillomavirus (HPV) vaccine and, 1236
 medical management, 1236
 nursing management, 1236
 pathophysiology, 1235
 risk factors for, 1235
- Oral cavity, 1229
 abnormalities of, 1230t–1231t
 dental plaque and caries, 1229–1233
 and nursing management, 1233
 continuing and transitional care, 1238
 food and fluid intake, 1237
 home care checklist, 1238t
 infection prevention, 1232
 mouth care, 1232
 pain and discomfort reduction, 1237
 patient education, 1234
 positive self-image, 1237
 periapical abscess, 1233
 Oral cholecystography, 1421
- Oral contraceptives, 1661
- Oral endotracheal intubation, 425f
- Oral glucose tolerance test (OGTT), 1491
- Oral hairy leukoplakia, 1231t
- Oral health, 1229
- Oral hygiene, 1233
- Oral rehydration salts (ORS), 2167
- Orbital cellulitis, 1929
- Orbital fractures, 1924
- Orbital trauma, 1923
- Orbits
 benign tumors of, 1929–1930
 malignant tumors of, 1930
 surgeries, 1931
- Orchiectomy, 1773, 1775
- Orchitis, 1769–1770
- Oregon Death With Dignity Act, 387
- Orexigenic, 1345
- Organ of Corti, 1938
- Orlistat, for obesity, 1350t
- Orogastric tube, 2195
- Oropharyngeal candidiasis HIV infection and, 1025
- Orthopedic surgery, patient undergoing, 1133, 1133c
 joint replacement, 1133
 total hip arthroplasty, 1185
 total knee arthroplasty, 1134
- Orthopnea, 471, 535, 662, 796
- Orthoses, 45, 1168
- Orthotopic liver transplantation (OLT), 1408
- Osmolality, 1244–1245
- Osmolarity, 229, 1538
- OsmoPrep, 1223
- Osmoreceptors, 232–233
- Osmosis, 226
- Osmotic diuresis, 228
- Osmotic pressure, 227
- Ossicles, 1937
- Ossiculoplasty, 1950
- Ossification, 1098
- Osteitis deformans. *See* Paget disease
- Osteoarthritic nodules, 1108
- Osteoarthritis (OA), 1122–1124
 clinical manifestations, 1123
 joint space narrowing and osteophytes, 1122, 1123f
 medical management, 1123
 exercise, 1123
 goals of management, 1123
 pharmacologic therapy, 1123–1124
 surgical management, 1122
 nursing management, 1123
 pathophysiology, 1122–1123
 primary, 1122
 risk factors for, 1122
 secondary, 1122
 x-rays, 1123
- Osteoblasts, 1098
- Osteochondroma, 1145
- Osteoclasts, 1098
- Osteocytes, 1098
- Osteogenesis, 1098
- Osteoid osteoma, 1145
- Osteolysis, 1134
- Osteomalacia, 1140–1141
 assessment and diagnostic findings, 1140
 gerontologic considerations, 1140
 medical management, 1140–1141
 pathophysiology, 1140
- Osteomyelitis, 1142–1144
 acute, 1142
 assessment and diagnostic findings, 1142
 causes of, 1142
 chronic, 1142
 clinical manifestations, 1142
 contiguous-focus, 1142
 diabetic, 1142
 hematogenous, 1142
 medical management, 1143
 pharmacologic therapy, 1143
 surgical management, 1143
 nursing process, 1143–1144
 pathophysiology, 1142
 patient with, 1144c
 prevention, 1142–1143
- Osteon, 1098
- Osteopenia, 1134
- Osteophytes, 1122
- Osteoporosis, 1134–1145
 assessment and diagnostic findings, 1137
 associated with intake of calcium, 250
 gerontologic considerations, 1134–1135
 medical management, 1137
 nursing process, 1139
 pathophysiology, 1135–1136
 prevention, 1134–1135
 primary, 1134
 risk factors, 1136
 secondary, 1134–1135
- Osteoporotic vertebral fractures, 1114
- Osteoprotegerin (OPG), 1099
- Osteosarcoma, 1146
- Osteotomy, 1120, 1124
- Otalgia, 1946
- Otitis media, 505, 509, 1949, 2089
- Otorrhea, 1948, 1948t
- Otosclerosis, 1952–1953
 description of, 1952
 stapedectomy, 1952
- Otoscopic examination, 1938–1940
- Ototoxicity, 1957
- Outcome and Assessment Information Set (OASIS), 50
- Ovarian cancer, 1700–1702
 and ascites, 1702
 assessment and diagnostic findings, 1701
 clinical manifestations, 1701
 epidemiology, 1700–1701
 family history and, 1700
 nursing management, 1702
 pathophysiology, 1701
 pharmacologic therapy, 1701–1702
 recurrence of, 1702
 risk factors, 1700
 staging of, 1701c
 surgical management, 1701
- Ovarian cysts, 1692–1693
- Ovarian hyperstimulation syndrome (OHSS), 1667
- Ovaries, 1642
- Overflow incontinence, 1612
- Overweight, 1347t, 1493
- Ovulation, 1643
- Ovulation detection methods, 1663
- Ovulation index, 1666



- Ovulation, pharmacologically induced, 1666–1668
- Oxalate stones, 1622
- Oxaliplatin, 321t, 322, 1279
- Oxandrolone 1884
- Oxycodone, 213
- Oxygen administration devices, 610t
- Oxygen administration methods, 609–614
- Oxygen masks, 613
- Oxygen saturation
- description of, 489
 - monitoring of, 487
- Oxygen supplementation, in airway
- obstruction, 2187
- Oxygen therapy, 608–609
- Oxygen toxicity, 609
- Oxygen transport, 465
- effects of pressure on, 469
- Oxyhemoglobin, 887
- Oxyhemoglobin dissociation curve, 469, 469c
- Oxymorphone, 213
- equianalgesic dose chart for, 210, 211t
- Oxytocin, 1450
- P**
- Pacemakers, in arrhythmia, 715–719
- complications with, 717–719, 718c, 718t
 - design, 715–716
 - dual-chamber pacing, 717
 - elective replacement indicator, 715
 - generator functions, 716–717
 - single-chamber atrial pacing, 717
 - spike, 717
 - surveillance of, 720
 - synchronized biventricular pacing, 717
 - transcutaneous, 716f
 - types of, 715–716
 - VVI pacing, 717
- Packed red blood cells (PRBCs), 896
- Paclitaxel, 321t
- PACU. *See* Postanesthesia care unit
- Paget disease, 1141–1142
- assessment and diagnostic findings, 1141
 - clinical manifestations, 1141
 - medical management, 1141–1142
 - pathophysiology, 1141
- Paget-Schroetter syndrome, 846
- Pain
- acute, 198
 - assessment of, 202–205
 - breakthrough, 198
 - during cardiac surgery, 680
 - categories of, 198–203
 - chronic, 198
 - classification of, 199t
 - definition of, 198
 - effects of, 198t
 - end-of-life care, 377
 - genitourinary, 1542t
 - location of, 203
 - modulation of, 201f, 202
 - musculoskeletal, 1102–1103
 - neuropathic, 198, 199t
 - nociceptive, 198–202, 199t
 - patient reports of, 202, 203c
 - perception of, 198
 - in postanesthesia units, 442–443
 - reassessment of, 206
 - types of, 198–203
 - unrelieved, 198t
- PAINAD (Pain Assessment IN Advanced Dementia), 206
- Pain Assessment IN Advanced Dementia. *See* PAINAD
- Pain management
- case study, 194
 - dosing regimens, 207
 - nonpharmacologic, 218, 220c
 - nonpharmacologic measure, 498
 - nursing implications, 219
 - pharmacologic, 206–218
 - plans of care, 337c
 - postsurgical patients, 447, 448f
 - preoperative, 408
 - responsibility for, 206
 - sickle cell disease and, 924
 - subcutaneous system, 448f
- Palifermin, 336
- Palindromic rheumatism, 1091
- Palliation, definition of, 302, 312
- Palliative care, 387c
- definition of, 369–370
 - for dyspnea, 379c
 - at the end of life, 369–371
 - outpatient, 371
- Palliative sedation, definition of, 386
- Palmar flexion, 41c
- Palmar-plantar erythrodysesthesia, 1328
- Palmer method, 1869
- Palpation
- deep, 84f
 - definition of, 84–85
 - light, 84f
 - for tactile fremitus, 480f
 - thoracic, 479–480
- Palpitations, 658
- Pamidronate, 251
- Pancreas
- age-related changes, 1418
 - anatomy of, 1417
 - disorders of, 1429–1443
 - cancer of pancreas, 1438–1439
 - hyperinsulinism, 1442
 - pancreatic cysts, 1438–1439
 - pancreatic islet tumors, 1442
 - pancreatitis, 1429–1437
 - tumors of head of pancreas, 1440–1442
 - ulcerogenic tumors, 1442–1443
- endocrine, 1417
- exocrine, 1417
- function of, 1417
- Pancreatic cancer, 1438–1439
- assessment and diagnostic findings, 1439
 - clinical manifestations, 1439
 - and diabetes, 1439
 - incidence of, 1438
 - medical management, 1439–1440
 - nursing management, 1440, 1440c
 - risk factors, 1438
 - survival rate, 1439
- Pancreatic cells, transplantation of, 1504
- Pancreatic cysts, 1438
- diagnosis of, 1438
 - nursing management, 1440
- Pancreatic insufficiency, 1296t
- Pancreatic islet tumors, 1442
- Pancreatic necrosis, 1433
- Pancreaticoduodenectomy (Whipple procedure or resection), 1441, 1441f
- Pancreaticojejunostomy, 1437
- Pancreatitis
- acute, 1429
 - assessment and diagnostic findings, 1430
 - clinical manifestations, 1430
 - complications and management, 1432
 - continuing and transitional care, 1433
 - medical management, 1431
 - nursing care plan, 1435c–1436c
 - nursing management, 1432–1433
 - in older adults, 1429
 - pathophysiology, 1429
 - self-care, 1433
 - chronic, 1429
 - assessment and diagnostic findings, 1437
 - clinical manifestations, 1436
 - medical management, 1437
 - surgical management, 1437
 - description of, 1416
 - severity of, prediction of, 1430c
- Pancuronium, 427t
- Pancytopenia, 968
- Panhypopituitarism, 1450
- Panretinal photocoagulation, for diabetic retinopathy, 1521
- Pantoprazole, 1431
- for gastritis, 1269t
 - for gastroesophageal reflux disease (GERD), 1258t
- Papanicolaou (Pap) smear, 1651
- Papaverine, 1750
- Papilledema, 1902, 2115
- Papule, 1806t
- Paracentesis, for ascites, 1374
- Paradoxical pulse. *See* Pulsus paradoxus
- Paradoxical tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS), 1021
- Paralysis, 2105
- Paranasal sinuses, 463f
- Paraphimosis, 1775
- Paraplegia, 1976, 2070
- Parasympathetic nervous system, 1975
- Parathormone, 1470
- Parathyroidectomy, 1471
- Parathyroid glands, 1470, 1470f
- functions, 230
 - hyperparathyroidism, 1470–1472
 - hypoparathyroidism, 1472–1473
 - pathophysiology, 1470
- Parathyroid hormone (PTH), 1098, 1136
- associated with hyperparathyroidism, 250
 - functions, 230
 - serum calcium level and, 248
- Paravertebral anesthesia, 429
- Parenteral fluid therapy, 264–269
- intravenous solutions, 264–269
 - purpose of, 264
- Parenteral nutrition, 1286
- administration methods, 1245
 - central method, 1314
 - implanted vascular access ports, 1315
 - percutaneous central catheters, 1314–1315, 1315f
 - peripherally inserted central catheters, 1315
 - peripheral method, 1314
 - surgically placed central catheters, 1315
 - complications of, 1316, 1317t
 - discontinuation of, 1315–1316
 - formulas, 1314
 - goals of, 1313



- Parenteral nutrition (*continued*)
 home care checklist, 1318c
 indications for, 1313, 1313t
 initiation of, 1317
 nursing process, 1316
 older adult patients and, 1318
- Paresthesia, 1104
- Parkinson's disease, 2125t
 strategies for patient, 2128c
- Paronychia, 1809
- Parotitis, 1235
- Paroxetine, 214
 for depression, 181
- Paroxysmal, 691
- Paroxysmal atrial tachycardia (PAT), 704
- Paroxysmal nocturnal dyspnea (PND), 662
- Paroxysmal supraventricular tachycardia (PSVT), 705
- Partial rebreathing mask, 613
- Partial thromboplastin time (PTT)
 reference range, 673t
- Pasero Opioid-Induced Sedation Scale, 216c
- Passive dressings, skin, 1816
- Passive external rewarming method, 2198. *See also* Hypothermia
- Pastes, wound care, 1820
- Patch, 1806t
- Patch testing, 1056
- Patellar reflex, 1983
- Pathogen-associated molecular patterns (PAMPs), 990
- Patient
 basic needs, 6
 as consumer of nursing and health care, 5
 emotional support to, 455
 hospitalized postoperative, 444–445
 receiving in clinical unit, 445
 surgical, 418
- Patient-controlled analgesia (PCA), 207–208
- Patient-controlled epidural analgesia (PCEA), 410
- Patient education
 activities of daily living, 37
 diabetes, 1507
 nursing process for, 60–62
 pain rating scale use, 203c
 teaching plan, 16–17
 wound care instructions, 453c
- Patient positioning
 perioperative injury, 433
 postoperative, 409c
 preventing musculoskeletal complications, 41
- Patient Protection and Affordable Care Act (PPACA), 160
- Patient Self-Determination Act (PSDA), 191
- Pay for performance, 34
- PCEA. *See* Patient-controlled epidural analgesia
- PD. *See* Peritoneal dialysis
- PE. *See* Pulmonary embolism
- Peak flow monitoring, 641c
- Peau d'orange, breast, 1711c
- Pectus carinatum, 477
- Pectus excavatum, 477
- Pediatric, genetics referrals in, 135c
- Pediculosis, 1838–1839
- Pediculosis capitis, 1838
- Pediculosis corporis, 1838
- Pediculus humanus capitis, 1838
- Pediculus humanus corporis, 1838
- Pedigree, 121f
- Pegfilgrastim, 1733
- Peginterferon alfa-2a, 1390
- Pegloticase, 1090
- Pelvic diaphragm, 1642
- Pelvic exenteration, 1697
- Pelvic floor exercises, 1292
- Pelvic fracture
 signs and symptoms of, 1182
 stable, 1182f
 unstable, 1183, 1183f
- Pelvic inflammatory disease (PID)
 causes of, 1684
 clinical manifestations, 1685
 complications, 1685–1686
 consequences, 1685
 home care checklist, 1686c
 medical management, 1685
 nursing management, 1686
 pathophysiology, 1685, 1685f
 patient education, 1686
- Pelvic lymph node dissection (PLND), 1762
- Pelvic muscle exercise (PME), 1614c, 1615
- Pelvic organ prolapse, 1687
 clinical manifestations, 1688
 cystocele, 1687
 enterocele, 1687–1688
 medical management, 1688
 Kegel exercises, 1688, 1688c
 pessaries, 1688, 1689f
 procidentia, 1688
 rectocele, 1687
 risk factors, 1687
 surgical management, 1688–1689
- Pelvic pain, chronic, 1694
- Pelvic prolapse, 1545
- Pelvis, 1181–1182, 1182f
- Pembrolizumab, 1856
- Pemoline, 2097
- Pemphigus vulgaris, 1846–1847
- Penetrating abdominal injuries, 2193
- Penetrating keratoplasty, 1918
- Penetrating trauma, 592
- Penicillin
 for anthrax treatment, 2234
 penicillin G, 1608t, 2090
- Penile cancer, 1775–1776
 assessment and diagnostic findings, 1776
 clinical manifestations, 1776
 medical management, 1776
 prevention, 1776
 risk factors for, 1776
 types of, 1776
- Penile implants, 1750–1751
- Penis, 1744–1745
- Penis transplant, 1751
- Penrose drains, 452, 452f
- Pentagon, damage to, 2230
- Pentostatin, 321t
- Penumbra region, 2033
- Peppermint oil, 1295
- Pepsin, 1210
- Peptic ulcer disease, 1270
 assessment and diagnostic findings, 1272
 clinical manifestations, 1272
 continuing and transitional care, 1277
 follow-up care, 1275
 and gastric outlet obstruction, 1277
 hemorrhage from, 1276
 home care checklist, 1277c
H. pylori infection and, 1271
 medical management, 1272
 dietary modification, 1273
 pharmacologic therapy, 1272–1273, 1273t
 smoking cessation, 1273
- NSAIDs use and, 1271
- nursing process, 1275
 anxiety reduction, 1276
 assessment, 1275
 complications management, 1276–1277
 diagnosis, 1275
 evaluation, 1277
 nursing interventions, 1275–1277
 nutritional status, 1276
 pain relief, 1275
 planning and goals, 1275
 in older adults, 1271, 1272
 pathophysiology, 1271–1272
 patient education, 1277
 perforation of peptic ulcer, 1276
 predisposing factors, 1271
 silent peptic ulcers, 1272
 silent peptic ulcers, 1272
 surgical management, 1278
 Zollinger–Ellison syndrome and, 1225
- Percussion
 definition of, 85–86
 sounds, 481t
 thorax, 480
- Percutaneous balloon microcompression, 2109
- Percutaneous biliary drainage, 1406
- Percutaneous cholecystostomy, 1425–1426
- Percutaneous coronary interventions (PCIs), 745
 complications of, 747, 747t
 coronary artery stent, 746–747
 definition of, 740
 postprocedure care, 747–748
 procedures, types of, 745
 PTCA, 745
- Percutaneous endoscopic gastrostomy (PEG), 1249
- Percutaneous needle biopsy, 492
- Percutaneous transhepatic cholangiography (PTC), 1422–1423
- Percutaneous transluminal angioplasty (PTA), 829
- Percutaneous transluminal coronary angioplasty (PTCA), 745–746
- Perforation, esophageal, 1255
- Perianal pruritus, 1830
- Periapical abscess, 1233
 acute, 1233
 blind dental abscess, 1233
 chronic, 1233
 clinical manifestations, 1233
 nursing management, 1233
- Pericardial effusion, 811–812
 assessment and diagnostic findings, 812
 clinical manifestations, 812
 medical management, 812
 pathophysiology, 811
- Pericardial space, 651
- Pericardiocentesis, 812
- Pericardiectomy, 812
- Pericarditis, 788–790
- Pericardium, description, 651
- Perilymph, 1937
- Perimenopause, 1671
- Perimetry testing, 1903
- Perindopril, for hypertension, 872t
- Perineal prostatectomy, 1762
- Perineal pruritus, 1652
- Perineorrhaphy, 1688
- Perineum, 1642



- Perineural anesthesia, 207
 Periodontitis, 1231t
 Perioperative nursing, 397
 genetics of, 403c
 immediate interventions, 412–414
 interventions, 404
 outcomes, 397
 patient education, 407
 phases of, 398c
 surgical classifications, 397
 Perioperative period
 considerations, 399–401
 definition of, 399
 nursing activities, 398c
 Periosteum, 1097f
 Peripheral arterial disease (PAD). *See also*
 Arterial disorders; Atherosclerosis
 foot and leg care in, 834c
 nursing care plan, 830c–831c
 in older adults, 832
 Peripheral artery disease, 835–837
 assessment and diagnostic findings, 835
 clinical manifestations, 835
 medical management, 835
 endovascular management, 835
 pharmacologic therapy, 835
 surgical management, 836
 nursing management, 836
 Peripheral dual-energy x-ray absorptiometry
 (pDXA), 1110
 Peripheral edema, 664
 Peripherally generated pain, 199t
 Peripherally inserted central catheters
 (PICCs), 1315
 Peripheral nerve disorders, 2110
 Peripheral nerve function, assessing for, 1108,
 1109c
 Peripheral nervous system, 1971
 Peripheral neuropathies, 2110
 Peripheral neurovascular dysfunction, 1109c
 Peripheral parenteral nutrition (PPN), 1314.
 See also Parenteral nutrition (PN)
 Peripheral sensitization, 197
 Peripheral smear, manual examination of, 894
 Peripheral vascular disease, diabetes and, 1519
 Peripheral vascular resistance, 820
 Periprosthetic fracture, 1184
 Peritoneal dialysis (PD), 1584–1585
 acute intermittent, 1587
 approaches for, 1587–1588
 complications of, 1587
 bleeding, 1587
 hypertriglyceridemia, 1587
 leakage of dialysate, 1587
 peritonitis, 1587
 continuous ambulatory, 1588
 continuous cycling, 1589c
 in diabetes, 1522
 goals of, 1584
 home care checklist, 1589c
 nursing management
 continuing and transitional care, 1589
 patient education, 1597
 psychosocial needs, 1588
 procedure, 1585
 catheter insertion, 1587
 equipment preparation, 1585
 exchanges, 1585
 patient preparation, 1591
 ultrafiltration in, 1585
 Peritoneum, 1270
 Peritonitis, 1297–1298
 assessment and diagnostic findings, 1298
 bacterial infection and, 1297
 clinical manifestations, 1297
 medical management, 1297
 nursing management, 1297
 pathophysiology, 1298
 primary, 1297
 secondary, 1297
 tertiary, 1298
 Peritonsillar abscess, 506–507
 Periurethral bulking, 1613
 Pernicious anemia, 918, 1225
 Per-oral endoscopic myotomy (POEM), 1253
 Persistent vegetative state, 1993
 Personal flotation device (PFD), 2199
 Personalized genomic treatments, 130–131
 Personalized health care, legal aspects, 132
 Personalized medicine, 117t
 Personal protective equipment (PPE), 2227
 Pertussis, 2175
 Pes cavus, 1121
 Pes planus, 1121
 Pessaries, 1689f
 PET. *See* Positron Emission Tomography
 Petechiae, 1804
 Peyronie's disease, 1777
 Phacoemulsification, 1916
 Phagocytic cells, 987
 Phagocytic immune response, 987
 Phagocytosis, 884
 Phakic intraocular lenses, 1920
 Phantom limb pain, 1197
 Pharmacogenetics, 117
 Pharmacogenomics, 130–131
 Pharmacokinetics, aging and, 179
 Pharmacologic therapy, 1954
 for psoriasis, 1842
 Pharyngitis, 503–505
 Pharynx, anatomy of, 463
 Phase I PACU, 437
 Phase II PACU, 437
 Phenazopyridine, for urinary tract infections,
 1608t
 Phendimetrazine, for obesity, 1350t
 Phenothiazines, 406t
 Phenotype, 119
 Phenoxybenzamine
 for pheochromocytoma, 1476
 Phentermine for obesity, 1350t
 Phentermine/topiramate-ER
 for obesity, 1350t
 Phentolamine, 1750
 Phenytoin, 179
 Pheochromocytoma,
 clinical manifestations, 1475
 hypertension and, 1474
 nostic findings, 1475
 nursing management, 1476
 paroxysmal form of, 1475
 pharmacologic therapy, 1476
 surgical management, 1476
 Phimosis, 1775
 Phlebitis, 267
 Phlebostatic axis, 684, 684f
 Phlebotomy, 896
 Phlegmasia cerulea dolens, 846
 pH monitoring, 1225
 Phoenix Society for Burn Survivors, 1888
 Phosphodiesterase type 5 (PDE-5) inhibitors
 for erectile dysfunction, 1748
 Phosphorus deficit, 1556t
 Phosphorus imbalance, 254–257, 254t
 hyperphosphatemia, 255
 hypophosphatemia, 254
 Photoaging, 1802
 Photophobia, 1925
 Photorefractive keratectomy (PRK), 1920
 Phototherapeutic keratectomy (PTK), 1918
 Phototherapy, for psoriasis, 1834
 Physical abuse, 189
 Physical activity
 in coronary artery disease (CAD), 730
 for cancer prevention, 309c
 Physical examinations
 components of, 83
 considerations, 83
 definition of, 71
 Physical fitness
 definition of, 56
 health promotion and, 65
 Physician Orders for Life-Sustaining Treatment
 (POLST), 376c
 Physiologic dead space, 462
 PID. *See* Pelvic inflammatory disease
 PIDDs. *See* Primary immune deficiency
 diseases
 Pigeon chest, 477
 Pigment stones, 1419. *See also* Cholelithiasis
 PI3 kinase disease, 1006t
 PillCam ESO, 1221
 Pilocarpine, 1085
 Pilonidal sinus or cyst, 1335
 Pindolol, for hypertension, 873t
 Pioglitazone, 1506t
 Pipe bomb, 2231
 Pirbuterol, 634
 Pitting edema, 238
 Pituitary adenomas, 2114
 Pituitary gland, 1449–1452
 anterior, 1449–1450
 diabetes insipidus, 1451
 pathophysiology, 1450
 posterior, 1450
 Syndrome of inappropriate antidiuretic
 hormone (SIADH), 1452
 tumors, 1450–1451
 Pituitary portal blood system, 1450
 Pituitary tumors, 1450–1451
 assessment and diagnostic findings, 1451
 basophilic tumors, 1451
 chromophobic tumors, 1451
 clinical manifestations, 1451
 eosinophilic tumors, 1450
 functional, 1450
 medical management, 1451
 nonfunctional, 1450
 surgical management, 1451
 Pivot joints, 1110
 PKD. *See* Polycystic kidney disease
 Placebos
 definition of, 218
 use of, 218
 Planning, in nursing process, 16–17
 expected outcomes, 17
 goals for nursing actions, 17
 nursing actions, 17
 setting priorities, 17
 Plantar digital neuroma. *See* Morton neuroma
 Plantar fasciitis, 1121
 Plantar flexion, 41c, 1185
 Plaques, 827



- Plasma, 885
 Plasma albumin, 896
 Plasma pH, 258
 Plasmapheresis, 895
 Plasma proteins, 890
 Plasminogen, 891
 Plasminogen activator tissue (tPA), 2037
 Plaster casts, 1167
 Plaster of Paris, 1167
 Plastic surgery
 cosmetic, 1859
 reconstructive, 1859
 skin grafts, 1859
 Platelet-activating factor, 1041
 Platelet defects, 934–935
 Plateletpheresis, 896t
 Platelets, 890
 Platelets, reference range, 673t
 Platform posturography, 1943
 PLCG2-associated antibody deficiency and immune dysregulation (PLAID), 1006t
 Pleura, 464
 Pleural biopsy, 492
 Pleural conditions
 acute respiratory failure, 556–558
 empyema, 556
 pleurisy, 553
 pulmonary edema, 560
 pulmonary embolism, 576
 Pleural effusion, 542
 Pleural friction rub, 552
 Pleural space, 553, 554
 Pleurisy, 553–554
 Pllicamycin, 321t
 PLISSIT model of sexual assessment, 1646
 PLND. *See* Pelvic lymph node dissection
 PMS. *See* Premenstrual syndrome
 Pneumatic dilation, in achalasia, 1253, 1253f
 Pneumoconiosis, 576–577
Pneumocystis pneumonia (PCP), 1021
 Pneumonectomy, 581c
 Pneumonia, 531–533
 assessment, 536
 assessments, 659t
 classification, 531
 clinical manifestations, 531
 complications, 536
 diagnostic findings, 536
 gerontologic considerations, 540
 medical management, 531
 nursing process, 542–543
 pathophysiology, 545
 prevention, 545
 risk factors, 543
 Pneumothorax, 593–595
 clinical manifestations, 594
 COPD patient, 607
 medical management, 608
 nursing care, 620c
 types, 593–594
 Podofilox, for HPV infection, 1681
 Podophyllin
 for HPV infection, 1681
 Poikilocytosis, 917
 Poison Control Center, 2201
 Poisoning
 carbon monoxide, 2204
 emergency treatment of, 2202
 food poisoning, 2204
 ingested (swallowed) poisons, 2202–2203
 skin contamination, 2204–2205
 Polio, 2139
 Polycystic kidney disease (PKD), 1562
 autosomal dominant, 1562
 autosomal recessive, 1562
 Polycystic ovary syndrome (PCOS), 1692
 Polycythemia, 605
 medical management, 928
 primary, 928
 secondary, 928
 Polycythemia vera, 965
 assessment and diagnostic findings, 965
 clinical manifestations, 965
 complications, 965
 medical management, 965
 nursing management, 966
 phlebotomy in, 965
 symptoms associated with, 966t
 Polydipsia, 1491
 Polyethylene glycol, 1219, 1290t
 Polymerase chain reaction (PCR), 2092
 Polymethylmethacrylate (PMMA), 1124
 Polymorphonuclear neutrophils (PMNs), 889
 Polymyalgia rheumatica (PMR), 1087
 Polymyositis, 1086
 Polyphagia, 1491
 Polypharmacy, 166
 adverse effects, 179
 definition of, 166
 drug interactions, 179
 Polyps of colon and rectum, 1333
 Polyurethane resins, 1166
 Polyuria, 1491
 Pomalidomide, 969
 Popliteal artery aneurysms, 841
 Population screening, 127
 Portal hypertension, 1376. *See also* Ascites
 Portosystemic encephalopathy. *See* Hepatic encephalopathy
 Position (postural) sense, 1969
 Positive chandelier sign, 1651
 Positive end-expiratory pressure (PEEP), 562
 Positive feedback, 105
 Positron emission tomography (PET), 678
 nervous system, 1989
 POSS. *See* Pasero Opioid-Induced Sedation Scale
 Postanesthesia care unit (PACU), 437
 admission to, 445
 Aldrete score form, 443f
 cardiovascular stability, maintenance of, 439
 definition of, 437
 discharge from, 444
 nausea and vomiting, control of, 441
 nursing management in, 438
 pain and anxiety, management of, 441
 patient assessments, 438
 phases of care in, 437–438
 record, 443f
 shock in, 440
 Postcoital intrauterine device insertion, 1664
 Posterior cruciate ligament (PCL), 1156
 Post-exposure prophylaxis (PEP), 1011
 Postinfarction syndrome, 1563
 Postmenopausal bleeding, 1671
 Postnecrotic cirrhosis, 1393. *See also* Cirrhosis
 Postoperative nausea and vomiting (PONV), 215
 aromatherapy for, 442c
 medications for, 441, 441t
 risk of, 442
 Postoperative neurologic assessments, 2109
 Postoperative nursing, immediate interventions, 445c
 Postoperative phase
 complication prevention, 409c
 complications, 455t
 definition of, 397
 hospitalized patients, 444–445
 nursing activities in, 398c
 Post-polio syndrome (PPS), 2112
 Postthrombotic syndrome, 853
 Posttraumatic stress disorder (PTSD), 2214
 Postural drainage, 625
 chest physiotherapy, 624
 Postural hypotension, 449
 assessment, 666c
 cardiovascular disease, 665t
 orthostatic, 666
 Postural instability, 2123
 Posture, assessment of, 1105
 Potassium
 deficit, 1556t
 effect on electrocardiogram, 244f
 excess, 1556t
 intravenous, 245
 Potassium chloride, 1585
 Potassium imbalance, 243
 hyperkalemia, 245
 hypokalemia, 243
 Potassium iodide, 1464
 Potassium-sparing diuretics for hypertension, 872t
 Powders, wound care, 1819
 PPACA. *See* Patient Protection and Affordable Care Act
 PP interval, 699
 Pramlintide, for diabetes, 1504
 Prasugrel, for angina, 734t
 Prazosin, for hypertension, 874t
 Preadmission testing (PAT), 397
 Preanesthetic medication, 413
 Precapillary sphincter, 819
 Precision Medicine Initiative (PMI), 8
 Preconception/periconception health care, 1668
 Prediabetes, 1488
 Predisposition testing, 130
 Prednisolone, 1073t
 Prednisone, 1073t
 Pregabalin, 217
 Pregnancy, genetics referrals in, 135c
 Pregnyl, 1667c
 Prehypertension, 866, 866t
 Preload, 655
 Premature atrial complex (PAC), 697, 697f
 Premature ejaculation, 1751
 Premature junctional complex, 704
 Premature ventricular complex (PVC), 705, 706f
 Premenstrual dysphoric disorder (PMDD), 1656
 Premenstrual syndrome (PMS), 1656
 clinical manifestations, 1656
 medical management, 1656–1657
 nursing management, 1657
 pharmacologic treatments, 1657
 Prenatal screening, 125
 Preoperative assessments, 402
 alcohol use, 403–404
 cardiovascular system, 404
 dentition, 403
 drug use, 403–404
 endocrine function, 405
 hepatic function, 405
 immune function, 405



- nutrition status, 402
- psychosocial factors, 407
- respiratory function, 404
- thyrotoxicosis, 405
- Preoperative education, 408
 - for ambulatory surgery, 410
 - for older adults, 410c
- Preoperative phase
 - checklist, 412f
 - definition of, 397
 - expected outcomes, 414, 414c
 - patient activities in, 414c
 - records, 413
 - timing of, 397
- Presbycusis
 - auditory changes, 175
 - definition of, 175
- Presbyopia, 175
- Pressure-reducing mattress, 1699
- Pressure-relieving devices, 1826
- Pressure support ventilation (PSV), 562
- Pressure ulcers, 1169
 - areas susceptible to, 1824f
 - assessment of, 1821
 - description of, 1824
 - developmental stages, 1825c
 - diagnosis of, 1824
 - healing, promotion of, 1828
 - interventions, 1826
 - nutritional status and, 1828
 - prevention of recurrence, 1828
 - risk factors, 1821
 - stages of, 1828
 - treatment of, 1828
- Pressurized metered-dose inhaler (pMDI), 616f
 - aerosol delivery devices, 615t
- Presymptomatic testing, 128
- Preventive ethics, 29
 - ethical decision making, 29
 - ethics committees, 29
 - patient self-determination, 29
- Priapism
 - ischemic form, 1776
 - nonischemic, 1776
 - stuttering, 1776
- Primary aldosteronism, 1482
 - assessment and diagnostic findings, 1483
 - clinical manifestations, 1482
 - medical management, 1483
 - nursing management, 1483
- Primary glomerular diseases, 1558–1560
- Primary headache, 1993, 2026
- Primary hypertension, 867. *See also* Hypertension
- Primary immune deficiency diseases (PIDDs), 1005
 - assessment and diagnostic findings, 1005
 - clinical manifestations, 1005
 - Ig replacement therapy at home, 1007
 - medical management, 1005
 - nursing management, 1007
 - pathophysiology, 1005
 - prevention, 1005
- Primary injury, 2056
- Primary liver tumors, 1404–1405
- Primary myelofibrosis, 968
- Primary polycythemia. *See* Polycythemia vera
- Primary prevention, 308
- Primary survey, 2186
- Primary thrombocythemia. *See* Essential thrombocythemia (ET)
- PriMatrix, 857
- PR interval, 694
- Prinzmetal's angina, 733c
- Private health information (PHI), 28
- PRK. *See* Photorefractive keratectomy
- Probenecid, 1090t
- Probiotics, 1295
- Procainamide, for ventricular tachycardia, 706
- Procaine, 429t
- Procarbazine, 321t
- Prochlorperazine, 441t
- Proctitis, 1333
- Proctoscopy, 1224
- Progesterone, 1643
- Prognosis
 - awareness of, 389
 - definition of, 389
- Programmed cell death. *See* Apoptosis
- Progressive multifocal leukoencephalopathy (PML), 1024
- Prolactin (PRL), 1449
- Proliferative phase, menstrual cycle, 1643
- Promethazine, 441t
- Prompted voiding, 1614c
- Pronation, 41c
- Prophylactic vaccines, 331
- Propofol, 427t
- Proportional assist ventilation (PAV), 562
- Propranolol
 - for hypertension, 873t
 - for hyperthyroidism, 1464t
 - for variceal bleeding, 1377
- Proprioceptors, 470
- Proprotein convertase subtilisin-kexin type 9 (PCSK9), 730
- Proptosis, 1929
- Propylthiouracil, for hyperthyroidism, 1464t
- Prostaglandin inhibitors, in diabetes insipidus, 1452
- Prostaglandins, 1041
- Prostanoids, 575
- Prostate cancer, 1755–1761. *See also* Prostate surgery
 - assessment and diagnostic findings, 1755
 - clinical manifestations, 1755
 - familial predisposition to, 1755
 - nursing care plan, 1757c–1760c
 - risk factors for, 1755
 - treatment for, 1755
 - chemotherapy, 1761
 - hormonal strategies, 1761
 - other therapies, 1761–1762
 - radiation therapy, 1756–1757
 - surgical management, 1756
- Prostatectomy
 - and catheter problems, 1767
 - and hemorrhage, 1766–1767
 - home care checklist, 1769c
 - infection after, 1767
 - laparoscopic radical, 1767
 - nursing process, 1725
 - anxiety reduction, 1765
 - assessment, 1765
 - complications management, 1766–1767
 - diagnosis, 1765
 - discomfort, reducing of, 1765–1766
 - evaluation, 1769
 - fluid balance, 1766
 - pain relief, 1766
 - patient education, 1772c
 - patient preparation, 1766
- planning and goals, 1765
- postoperative nursing interventions, 1766–1769
 - preoperative nursing interventions, 1765
- perineal, 1762
- retropubic, 1762
- sexual dysfunction after, 1768
- suprapubic, 1768
- and urinary incontinence, 1768
- and venous thromboembolism, 1767
- Prostate gland, 1745
- Prostate-specific antigen (PSA), 1747
- Prostate surgery, 1762
 - complications, 1762
 - nursing process, 1765
 - procedures, 1762, 1763t–1764t
 - laparoscopic radical prostatectomy, 1762
 - perineal prostatectomy, 1762, 1764f
 - retropubic prostatectomy, 1762, 1764f
 - suprapubic prostatectomy, 1762, 1764f
 - transurethral incision of the prostate, 1762, 1764f
 - transurethral resection of prostate, 1762, 1764f
- Prostatic stents, 1755
- Prostatitis
 - clinical manifestations, 1753
 - medical management, 1753
 - nursing management, 1753
 - patient education, 1753
 - types of, 1753
- Prostheses, 45
- Protamine sulfate, 749
- Protease inhibitors, 1019t–1020t
- Proteasome inhibitors, 979
- Protein
 - deficit, 1556t
 - in diabetic diet, 1494
 - hormones, 1447
 - metabolism, role of liver in, 1366
 - wound healing and, 404t
- Protein C deficiency, 945
- Protein S deficiency, 945
- Proteinuria, 1537
- Proteus vulgaris*, wound infections, 456
- Prothrombin time (PT), 894
 - reference range, 673t
- Proton-pump inhibitors (PPIs), for esophageal spasm, 1254
- Proton therapy, 317
- Provider in triage (PIT), 2185
- Provirus, 1013
- Provocative testing, 1045
- Proximal interphalangeal (PIP) joint, 1123
- Pruritus
 - definition of, 1819
 - general, 1829
 - liver dysfunction and, 1384
 - at night, 1839
 - perianal, 1830
 - perineal, 1830
 - post-burn, 1885
- Pseudoaddiction, 212
- Pseudobulbar affect, older adults with, 2017
- Pseudocysts, 1437. *See also* Pancreatic cysts
- Pseudoephedrine sulfate, for stress incontinence, 1613
- Pseudohyperkalemia, 246
- Pseudomonas aeruginosa*, 2150
 - wound infections, 456
- Pseudothrombocytopenia, 932



- Psoriasis, 1842
 home care checklist, 2150
 management of, 1843
 Psoriatic arthritis, 1088
 Psychiatric emergencies
 patients who are overactive, 2214
 patients who are suicidal, 2214
 posttraumatic stress disorder, 2214
 Psychiatric nurse clinician, 2133
 Psychoneuroimmunology, 103
 Psychosocial assessment, 136, 136c
 Psychosocial interventions, 411
 Psychotherapy, for depression, 181
 Psyllium, 1290t
 PTCA. *See* Percutaneous transluminal coronary angioplasty
 PTK. *See* Phototherapeutic keratectomy
 Ptosis, 1896
 PTSD. *See* Posttraumatic stress disorder
 Pubic hair, 1811–1812
 Public health nursing, 54
 Pulmonary agents, 2237
 Pulmonary angiography, 489
 Pulmonary artery catheter, 684, 685f, 685f
 Pulmonary artery pressure monitoring, 685
 Pulmonary contusion, 591
 Pulmonary diffusion, 466
 Pulmonary disorders, assessments, 659t
 Pulmonary edema, 574
 burn injuries and, 1885
 flash, 798
 Pulmonary function tests (PFTs), 486, 486t
 Pulmonary hypertension, 574–576, 574c
 and heart failure, 794
 sickle cell disease and, 920–921
 Pulmonary perfusion, 466
 Pulmonary rehabilitation, 618
 Pulmonary tuberculosis, 546
 assessment, 548–549
 clinical manifestations, 547
 diagnostic findings, 548–549
 gerontologic considerations, 549
 medical management, 549
 medications, 549t
 nursing management, 550
 pathophysiology, 546–547
 transmission, 546
 Pulmonary vascular resistance, 656
 Pulmonic area, 667
 Pulmonic valve, 765
 anatomy of, 766, 766f
 Pulse amplitude, 666
 Pulse deficits, 666
 Pulseless electrical activity (PEA), 813
 Pulse oximetry, 487, 487f
 Pulse pressure, 665
 analysis, 687
 orthostatic (postural), 666
 Pulsus paradoxus, 812
 Punctum plugs, 1085
 Purkinje cells, 654, 654f
 Purulent, 631
 Pustule, 1807t
 PUVA, 1844
 P vera. *See* Polycythemia vera
 P wave, 694
 Pyelonephritis, 1610
 acute, 1610
 chronic, 1610
 Pyloric obstruction, 1268
 Pyloroplasty, 1273
 Pylorus, 1270
 Pylorus-preserving pancreaticojejunostomy (PPPD), 1441
 Pyoderma, 1834
 Pyogenic liver abscesses, 1412
 Pyridostigmine bromide, 2101
 Pyridoxine deficiency, 1384
 Pyrosis, 1253
 Pyuria, 1548
- Q**
 QRS complex, 694, 709
 QT interval, 246, 249, 694, 700, 706
 Quadriceps muscles, strengthening of, 43
 Quadriplegia, 2070
 Quality and Safety Education for Nurses (QSEN), 9–10, 10t
 Quality of life, effect of pain and, 45
 QuantiFERON-TB Gold (QFT-G) test, 548–549
 Quantitative computed tomography (QCT), 1110
 Quantitative ultrasound (QUS), 1110
 Quetiapine, 1346t
 Quick SOFA (qSOFA) scale, 294
- R**
 RA. *See* Rheumatoid arthritis (RA)
 Rabepazole, 1258t, 1269t, 1272, 1273t
 Race/ethnicity, 72–73, 76–79, 88, 132–134, 157, 163, 382, 634, 672
 breast cancer, risk factor for, 1719
 hematologic disorders, prevalence of, 891
 hypercoagulability and, 845
 hypertension, prevalence of, 866
 infection, risk factor for, 2172
 obesity, risk factor for, 1343f
 osteoporosis, risk factor for, 1136
 prohibited foods and beverages based on, 90c
 pulmonary health and, 475c
 testicular cancer, risk factor for, 1771
 Radial shafts, 1181
 Radiation, 1697
 electrical shock and, 107
 exposure, 1713
 external, 317
 implants, 315
 internal, 317–318
 safety, 1705
 skin integrity impaired by, 349, 1810c
 Radiation therapy, 315–316, 350–351, 1700, 1774–1776, 1856, 2117
 administration of, 317–318, 1468
 for breast cancer, 1730–1731
 in cancer therapy, 305, 309, 312
 dosage, 316–317
 external, 1705
 intraoperative, 1439, 1705
 for liver tumors, 1405
 nursing management, 318–319
 for pancreatic tumors, 1439
 of pituitary gland, 1480
 for prostate cancer, 1756–1761
 protecting caregivers, 319
 stereotactic, 1451
 for testicular cancer, 1773
 thrombocytopenia and, 357
 toxicity, 318
 of tumors, 1627
 Radical cystectomy, 1620
 Radical hysterectomy, for cervical cancer, 1696c
 Radical prostatectomy, for prostate cancer, 1756
 Radical trachelectomy, for cervical cancer, 1696c
 Radical vaginal hysterectomy, for cervical cancer, 1696c
 Radioactive iodine therapy, 1462–1463
 Radioactive iodine uptake test, 1455
 Radioimmunoassay tests, 1448
 Radiologic weapon, 2237
 Radiosensitive tumor, 316
 Ramucirumab, 1279
 Range of motion, 41c, 1074t
 Rape, 1647–1648, 1663, 2212–2213
 Rasburicase, 926, 954
 Raynaud's disease, 832, 844
 Raynaud's phenomenon, 844, 1079, 1083, 1085–1086
 Reactive arthritis, 1088
 Real-time communication, 8
 Rebound hypertension, 878–880
 Recent Life Changes Questionnaire (RLCQ), 99
 Receptive aphasia, 2033, 2034t
 Receptor for activated nuclear factor-kappa B ligand (RANKL), 1099
 Recombinant deoxyribonucleic acid (DNA) technology, 995
 Recombinant factor VIIa (Novoseven, Novo Nordix), 937
 Recombination, 120
 Reconstructive surgery, 315
 Rectocele, 1545, 1650, 1687–1688, 1688f, 1690, 1698
 Recurrent abortion, 1664
 Red blood cell destruction, 888–889
 Red blood cell production, regulation of, 1539
 Red blood cells (RBCs), 108, 230, 278, 282, 286, 306t, 323, 468–470, 762, 819, 885, 887, 1543t, 1548t, 1559, 1733, 1872, 1875, 1970, 1988, 1999, 2189–2190, 2239
 Red man syndrome. *See* Generalized exfoliative dermatitis
 Reduction mammoplasty, 1739
 Reed-Sternberg cells, 970–971, 970f
 Referral, 354
 to cancer patient for home care, 358
 Reflexes
 Achilles, 1983
 assessment of, 1983f
 biceps, 1982
 brachioradialis, 1983
 corneal, 1984
 deep tendon, 1982–1984
 documentation of, 1984c
 examination of, 1982–1984
 gag, 1984
 patellar, 1983
 superficial, 1984
 triceps, 1982–1983
 Reflex hammer, 83, 1982, 1983f
 Refractive errors, 1903
 Refractive surgeries, 1919
 Registered nurse, 34–35, 51
 Registered nurse first assistants (RFNAs), 417, 420
 Regular insulin, 247, 1500, 1509, 1516, 1527c, 1528–1530



- Regurgitation, 766–767
 aortic, 769
 mitral, 767–768
- Rehabilitation, 36–37
- Rehabilitation Act of 1973, 146, 150
- Rehabilitation model, 144c
- Rehabilitation nursing, 36–37
- Rehospitalization, 35
- Reinforcement, 58, 60, 389, 518, 529, 608, 858, 1404, 1507, 1576, 1582
- Reiter's syndrome, *see* Reactive arthritis
- Relaxation techniques, 77, 110–112, 323, 519, 894, 923–924, 1074, 1080, 1148, 1166, 1295, 1549, 1791, 1837, 1880, 1884, 1986
- Religious beliefs
 end-of-life care and, 370c
 respect for, 411
- Remifentanyl, 426t
- Remission, 1067
- Remodeling, bone, 174, 1098–1099, 1112
- Renal angiography, 1551
- Renal artery embolization, 1563
- Renal cancer, 1562–1563
 assessment and diagnostic findings, 1563
 clinical manifestations, 1563
 medical management, 1563–1564
 nursing management, 1564
 pharmacologic therapy, 1563–1564
 risk factors, 1563c
 surgical management
 minimally invasive technologies, 1563
 nephrectomy, 1563
 renal artery embolization, 1563
- Renal clearance, 1537, 1539
- Renal function tests, 1549, 1549t
- Renal replacement therapies
 continuous renal replacement therapies, 1583–1584
 continuous venovenous hemodialysis (CVVHD), 1584
 continuous venovenous hemofiltration (CVVH), 1584
 hemodialysis, 1577–1583
 kidney transplantation, 1596–1600
 peritoneal dialysis, 1584–1591
- Renal rickets, 1470
- Renal trauma, 1600
 blunt, 1600
 clinical manifestations, 1601
 medical management, 1601
 nursing management, 1601–1602
 surgical management, 1601
- Renin, 232, 275, 1519, 1536, 1539
- Renin–angiotensin–aldosterone system, 232
- Repaglinide, 1346c, 1505t
- Repolarization, 691, 694, 698t, 713
- Reproductive system
 age-related changes, 172
 chemotherapy-related effects, 324
- Reservoir, 780, 2145
 latent, 1013
- Residual urine, 1613, 1616–1619
- Resistant hypertension, 871, 875
- Resorption, bone, 1098, 1111–1112, 1136
- Resource Model of Preventive Health
 Behavior, 64
- Respiration, 466
 function of, 465–470
 patterns of, 479t
 rates and depths of, 479t
 resting, 470
- Respiratory depression, 104, 208–210, 214, 254, 428–429, 431, 441–442, 488, 570, 643, 761, 1223, 1353, 2026, 2210
 sedation and, 215–217
- Respiratory disorders, 495c
 assessment findings in common, 484t–485t
 genetics and, 475c
 risk factors, 474c
- Respiratory distress, 2103
- Respiratory excursion, 479–480, 480f
- Respiratory failure, 2076–2077, 2090, 2101–2102
- Respiratory function, preoperative assessments, 404
- Respiratory system
 anatomy
 lower respiratory tract, 464–465
 upper respiratory tract, 463–464
 diagnostic evaluation, 486–493
 function of, 465–470
 older adults, 470
 physical assessment of
 general appearance, 475–476
 lower respiratory structures, 477–483
 upper respiratory structures, 476–477
- Respiratory weaning, 569
- Rest pain, 822, 835–836
- Restraints, 28
- Restricted zones, 421
- Restrictive cardiomyopathy (RCM), 777–778
- Restrictive lung disease, 556
- Retapamulin, 1835
- Retepase, 740, 843, 849t, 851
- Rete ridges, 1800
- Reticulocytes, 887, 890, 919–920
- Reticuloendothelial cells, 888
- Reticuloendothelial system (RES), 885, 890, 933
- Retina, 1898, 1898f, 1899
- Retinal detachment, 1920–1921, 1920f
- Retinal vascular disorders
 branch retinal vein occlusion (BRVO), 1922
 central retinal artery occlusion, 1922
 central retinal vein occlusions (CRVOs), 1921–1922
- Retinoids, 1447, 1833–1834, 1843
- Retinopathy, 1492, 1496
- Retraction signs, breast, 1711c
- Retrograde ejaculation, 1751
- Retrograde pyelography, 1551
- Retroperitoneal lymph node dissection (RPLND), 1773
- Retropubic prostatectomy, 1762
- Retrovirus, 1012
- Reverse transcriptase, 1013f
- Reverse transcriptase–polymerase chain reaction (RT-PCR), 1015–1016
- Reverse Trendelenburg position, 434, 858
- RFNA. *See* Registered nurse first assistants (RFNAs)
- Rhabdomyolysis, 2195, 2197
- Rh antigen, 899
- Rheumatic diseases, 1067
 assessment and diagnostic findings, 1069, 1070c
 care of patient with, 1075c–1077c
 clinical manifestations, 1069
 common blood studies for, 1071t
 exacerbation, 1067
 laboratory studies, 1069, 1071t
 medical management, 1069–1074
 exercise and activity, 1073–1074, 1074t
 medications, 1072t–1073t, 1078
 nonpharmacologic pain management, 1069, 1073
 in older adults, 1074
 pathophysiology, 1068, 1068f
 autoimmunity, 1068–1069
 degeneration, 1069
 inflammation, 1068
 remission, 1067
- Rheumatic endocarditis, 784–785
- Rheumatic fever, 75, 84, 503–504, 768–769, 784, 785c, 787, 992
- Rheumatoid arthritis (RA)
 assessment and diagnostic findings, 1079
 clinical manifestations, 1078–1079
 continuing and transitional care, 1082
 home care checklist, 1081c
 medical management
 early RA, 1079–1080
 established RA, 1080
 nursing management, 1081
 pathophysiology, 1078
 patient education, 1081–1082
- Rheumatoid factor, 786, 1071t, 1079, 1085, 1842
- Rheumatoid nodules, 1079
- Rhinitis, 495–497
 causes, 496t
 clinical manifestations, 496
 medical management, 496–497
 medication therapy, 497
 nursing management, 497
 pathophysiology, 495
 signs and symptoms, 496
- Rhinitis medicamentosa, 498, 500, 1051–1052
- Rhinorrhea, 496–498, 539, 1049, 1948
- Rhinosinusitis, 472, 495, 496f, 496t, 1929, 1948, 2091
- Rho(D) immune globulin (RhoGAM), 1665
- Rhonchi, 482
- Rhytidectomy, 1860
- Rib fractures, 590–591, 591f, 1192, 1600, 1738
- Riboflavin deficiency, 1384
- Rifaximin, 1295, 1382
- Right of access to health care, 146–149
- Right-sided heart failure, 575–576, 604–605, 614, 624c, 760, 782, 797, 851
- Right ventricular failure. *See* Right-sided heart failure
- Rigid bronchoscope, 490–491
- Rilpivirine, 209, 1019t
- Riluzole, 2131
- Rinne test, 1940, 1940f
- Risperidone, 495, 1346c
- Ritonavir, 935c, 1020t, 1933
- Rituximab, 322, 927, 934, 959, 972–974, 1058, 1073t, 1085, 1846–1847
- Rivaroxaban, 661, 701, 848t, 851, 2036, 2050
- Robert Wood Johnson Foundation (RWJF), 9
- Robotic-assisted laparoscopic radical prostatectomy, 1762
- Rocky Mountain spotted fever, 2147t, 2202
- Rocuronium, 426t, 573
- Romberg test, 1981
- Romiplostim, 934, 964
- Ropivacaine, 207
- Rosiglitazone, 1395, 1506t
- Rotation, 41c
- Rotator cuff tears, 1154
- Rotor syndrome, 1372



- Round ligaments, 1642
 Routes of administration, 206–207
 Roux-en-Y gastric bypass (RYGB), 1354
 Roux-en-Y hepaticojejunostomy, 1409, 1409f
 Rovsing sign, 1299, 1299f
 RR interval, 694–695, 709–710
 Rubber band ligation procedure, 1335
 Rubor, 665t, 822, 844
 Rule of nines, 1868
 Ruxolitinib, 966, 968
- S**
 S-1 (oral fluoropyrimidine), 1439
 Sacral edema, 797
 Saddle joints, 1100
 Safety
 National Patient Safety Goals, 411c
 within OR, 420–424
 patient, 411
 Salem Sump tube, 1063t
 Salicylates, 1000, 1069, 1072t, 1090
 Saline implants, for augmentation
 mammoplasty, 1739
 Salivary calculi, 1235
 Salivary glands, disorders of
 neoplasms, 1235
 parotitis, 1234
 sialadenitis, 1234–1235
 sialolithiasis or salivary calculi, 1235
 Salmeterol, 616, 617t, 636t, 637t, 639, 645
Salmonella infections, 2165–2166
 Salpingectomy, 1670
 Salpingitis, 1669, 1685
 Salpingo-oophorectomy, 1670, 1694, 1697,
 1701–1702
 Salvage surgery, 313–314
 Saquinavir (SQV), 1020t
 Sarcoidosis, 251, 492–493, 552–553, 775, 1091,
 1620, 1929
 Sarcoplasmic reticulum, 1100
Sarcoptes scabiei, 1840
 Sargramostim, 906c, 954
 Sarin, 2235t, 2236
 Satiety, 1345
 Saturated solution of potassium iodide (SSKI),
 1464t
 Saxagliptin, 1505t
 SBP. *See* Spontaneous bacterial peritonitis
 Scabies, 1840–1841
 Scalp injuries, 2056
 Scarring, prevention of, 1834
 Scars
 hypertrophic, 1889
 keloid, 1889
 prevention and treatment of, 1889
 SCBA. *See* Self-contained breathing apparatus
 (SCBA)
 Schilling test, 918
 School nurses, 2167
 Schwann cells, 1957
 Sciatica, 1114, 2137–2138
 SCIG. *See* Subcutaneous immunoglobulin
 Scintigraphy, 1221
 SCIT. *See* Subcutaneous immunotherapy
 Scleral buckle, 1921, 1921f
 Scleroderma
 assessment and diagnostic findings, 1086
 clinical manifestations, 1086
 localized, 1086
 medical management, 1086
 nursing management, 1086
 pathophysiology, 1086
 systemic, 1086
 Sclerotherapy, 859–860, 1335, 1378, 1378f
 Scoliosis, 1105, 1106f
Scope and Standards of Practice (ANA), 5, 12,
 15, 57
 Scopolamine, 441t
 transdermal, 380t
 Scotomas, 1903
 Screenings, brief interventions, and referral to
 treatment (SBIRT), 2205
 Scrub role, 416, 420
 Seasonal allergic rhinitis. *See* Allergic rhinitis
 Sebaceous glands, 1799f, 1800
 Seborrhea, 1831
 Seborrheic dermatoses, 1831–1832
 Seborrheic keratoses, 1851–1852
 Sebum, 1800
 Secondary headache, 2026
 Secondary health conditions, 143
 Secondary hypertension, 867, 867c
 Secondary injury, 2056
 Secondary prevention, 308
 Secondary survey, 1874, 2187, 2193
 Secondary thrombocytosis, 942
 Second-degree burns, 1867, 1867t
 Second-degree strain, 1153
 Second-intention healing, 449
 Secretin, 1211t, 1417
 Secretory disorders, 1830–1831
 acne vulgaris, 1832–1834
 hidradenitis suppurativa, 1831
 seborrheic dermatoses, 1831–1832
 Secretory phase, menstrual cycle, 1643–1644
 Sedation
 informed consent and, 401
 moderate, 429–430
 monitored, 430
 opioid-induced, 216c
 respiratory depression and, 215–216
 unintended, 215
 SEER. *See* Surveillance, Epidemiology, and End
 Results registry
 Segmentation contractions, 1211
 Segmentectomy, 581c
 Segmented bronchial drainage. *See* Postural
 drainage
 Segmented neutrophils, 355, 889
 Seizure disorders, 2017–2026
 Seizures, 1978, 2014, 2017, 2019
 assessment and diagnostic findings,
 2019–2020
 causes of, 2019
 classification of, 2019c
 clinical manifestations, 2019
 nursing management, 2020
 pathophysiology, 2019
 relieving pain and preventing, 2012
 Selective estrogen receptor modulator
 (SERM), 1138t, 1719, 1734t
 Selective serotonin reuptake inhibitors
 (SSRIs), 181, 209t, 214, 239, 966,
 1346c, 1657, 1752, 1830, 2130
 Self-care
 deficits, 37–40
 fostering of, 38–39
 independence in, 185
 Self-catheterization, 1619–1620, 2083, 2099
 Self-concept, 80–82
 Self-contained breathing apparatus (SCBA),
 2228
 Self-monitoring of blood glucose (SMBG),
 1497
 candidates for, 1498
 factors affecting, 1498
 frequency of, 1498
 responding to, 1498
 Self-report, 202–203
 Self-responsibility, 65
 Semen analysis, 1666
 Semen cryopreservation, 1775
 Semilunar valves, 653, 655, 668, 670, 766
 Seminal vesicle, 1627, 1744, 1744f, 1756,
 1774–1775
 Semirestricted zone, 421
 Semirigid rod, 1749t, 1750–1751
 Senna, 1290t, 1564
 Sensations, altered, 1104
 Sensorineural hearing loss, 1941, 1941t,
 1944
 Sensory disability, 61t, 143
 Sensory perception
 impaired, 1821–1822
 improvement of, 1827
 pressure ulcer and, 1823t
 Sensory system
 age-related changes, 171t, 175–176
 examination of, 1981–1982
 function of, 1977
 sensory loss *vs* sensory deprivation, 175
 Sentinel event, 2182
 Sentinel lymph node, 313, 1723
 Sentinel lymph node biopsy (SLNB), 313,
 1723, 1723t
 axillary lymph node dissection and,
 1724t
 nursing management, 1723–1725
 Sepsis, 508–509, 521, 533
 burn injuries and, 1886
 incidence of, 291–292
 wound, 456
 Sepsis-Related Organ Failure Assessment
 Score, 294
 Septic (infectious) arthritis
 assessment and diagnostic findings, 1145
 clinical manifestations, 1145
 medical management, 1145
 nursing management, 1145
 Septic meningitis, 2088
 Septic shock
 fluid replacement, 293
 hospital-acquired conditions, 291
 incidence of, 292
 medical management, 293–294
 nursing management, 294–296
 nutritional therapy, 294
 pathophysiology, 292–293
 risk factors, 292, 292c
 Sequential compression devices (SCDs), 293,
 1698
 Sequential Organ Failure Assessment (SOFA),
 294
 Sequestration crisis, 920
 Sequestrectomy, 1143
 Sequestrum, 1142–1143
 Seroma, 1724, 1724t, 1728
 Serosa, 1276
 Serotonin, 1041
 Serotonin and norepinephrine reuptake
 inhibitors (SNRI), 217, 922
 Serous otitis media, 505, 1949
 Sertoli cell tumors, 1771



- Sertraline, 1080, 1091, 1830, 2209
 Serum, 890
 Sevelamer carbonate, 1572
 Severe combined immune deficiency (SCID), 1006t
 Sevoflurane, 425, 425t
 Sex hormones, effects on bone remodeling, 1099
 Sexual abuse, in childhood, 1647–1648
 Sexual assault, 1011, 1647, 2212
 assessment and diagnostic findings, 2212
 management
 follow-up care, 2213
 physical examination, 2212–2213
 specimen collection, 2213
 treating potential consequences of rape, 2213
 Sexual assault nurse examiner (SANE), 2212
 Sexual assessment, 82
 Sexual dysfunction, 1524–1525
 Sexual function, aging and, 172
 Sexual history, 1646–1647
 Sexuality, 82
 Sexually transmitted disease (STD), 1009, 1333, 2168, 2169
 Sexually transmitted infections (STIs), 152, 998, 1010, 1063, 1333, 1607, 1646, 1678, 1752, 1839, 2168–2171, 2213
 Shear
 pressure ulcers and, 1823t, 1824f, 1827
 reduction of, 1827
 Shiga toxin-producing *Escherichia coli* (STEC), 2166
 Shigella infection, 2166
 Shock, 273–274
 cardiogenic, 287–290
 clinical manifestations, 276
 continuing and transitional care, 298
 distributive, 290–297
 fluid replacement in, 282–283
 general management strategies, 282–285
 hypovolemic, 285–287
 medical management, 277, 280–281
 multiple organ dysfunction syndrome and, 297–298
 nursing management, 277–281
 nutritional support, 283–285
 pathophysiology, 276f
 blood pressure regulation, 275
 cellular changes, 274
 vascular responses, 274–275
 self-care, patient education on, 298
 stages of, 275
 clinical findings, 276t
 compensatory stage, 276–279
 irreversible stage, 281
 progressive stage, 279–281
 vasoactive medication therapy, 283
 Short-acting beta-2-adrenergic agonists (SABAs), 616
 Short-acting muscarinic antagonists (SAMAs), 616
 Shoulder spica casts, 1171
 Shunt surgery, for variceal bleeding, 1379–1380, 1379f
 Sialadenitis, 1234–1235
 Sialolithiasis, 1235
 Sickle cell crisis, 920, 923–925
 acute vaso-occlusive crisis, 920
 aplastic crisis, 920
 sequestration crisis, 920
 Sickle cell disease (SCD)
 assessment and diagnostic findings, 921
 clinical manifestations, 919–921
 acute chest syndrome, 920
 pulmonary hypertension, 920–921
 reproductive problems, 921
 sickle cell crisis, 920
 stroke, 921
 medical management
 hematopoietic stem cell transplant, 921
 pharmacologic therapy, 921–922
 supportive therapy, 922–923
 transfusion therapy, 922
 Sickle cell trait, 919, 921
 Sickle hemoglobin (HbS) gene, 919
 Sick sinus syndrome, 696
 SIEA. *See* Superficial inferior epigastric artery flap
 Sigmoidoscopy, 1224
 Sildenafil, 576, 1749t, 1750, 1750t, 2083, 2205
 Silent ischemia, 733c
 Simeprevir, 1391
 Simethicone, 1258t
 Sims position, 434f, 435
 SIMV. *See* Synchronized intermittent mandatory ventilation
 Simvastatin, 495, 731t, 828, 935c, 2036
 Single gene conditions, 128
 Single photon emission computed tomography (SPECT), 678, 1968, 1987
 Sinoatrial (SA), 232, 653
 Sinus arrhythmia, 666, 697, 697f
 Sinus bradycardia, 696, 696f
 Sinuses, 499–500
 assessment of, 499
 frontal, 476, 495, 502
 maxillary, 476, 495, 502
 paranasal, 463, 463f, 494, 499–500
 Sinus node arrhythmias
 sinus arrhythmia, 697, 697f
 sinus bradycardia, 696, 696f
 sinus tachycardia, 696–697, 697f
 Sinusoidal harmonic acceleration, 1943
 Sinus rhythm, 695–696, 696f
 with first-degree AV block, 708, 708f
 with second-degree AV block, 709, 709f
 Sinus tachycardia, 696–697, 697f
 Sipuleucel-T, 332, 1756
 Sirolimus, 747, 779, 1058, 1408, 1410, 1598t
 SIRS. *See* Systemic inflammatory response syndrome
 Sitagliptin, 1505t
 Sitz baths, 1182, 1332, 1335–1336, 1552, 1616, 1680, 1683, 1687, 1691, 1753, 1766–1767, 1770, 1775
 Sjögren's syndrome, 1078–1079, 1085
 Skeletal muscle contraction, 1100–1101
 Skeletal system, structure and function of, 1097–1099
 Skeletal traction, 1174–1175, 1174f, 1191–1192, 2075
 nursing interventions, 1176
 Skene duct cysts, 1691
 Skene gland, 1641
 Skin, 1108
 age-related changes in, 1802, 1802f, 1803c
 anatomy, 1799f
 dermis, 1800
 epidermis, 1799–1800
 subcutaneous tissue, 1800
 assessment, 1802–1803
 health history, 1803
 physical assessment, 1803–1812
 bacterial infections
 carbuncles, 1812–1813, 1836
 folliculitis, 1812, 1835
 furuncles, 1812–1813, 1835–1836, 1836f
 impetigo, 1835, 1835f
 benign skin tumors
 actinic keratoses, 1851–1852
 angiomas, 1852
 cysts, 1851
 dermatofibroma, 1852
 keloids, 1852
 moles, 1852
 seborrheic keratoses, 1851–1852
 Von Recklinghausen disease, 1852
 warts, 1852
 blistering diseases
 bullous pemphigoid, 1846–1847
 dermatitis herpetiformis, 1847
 pemphigus vulgaris, 1846–1847
 Stevens-Johnson syndrome, 1848–1851
 toxic epidermal necrolysis, 1848–1851
 cancer, 1852, 1853c–1854c
 color
 assessment, 1803–1806
 changes in, 1804, 1805t
 cyanosis, 1804
 ecchymosis, 1804, 1806
 erythema, 1806
 jaundice, 1806
 dermatophyte infections, 1813
 diagnostic evaluation
 clinical photographs, 1813
 nursing implications, 1813
 patch testing, 1813
 skin biopsy, 1813
 skin scrapings, 1813
 Tzanck smear, 1813
 Wood Light examination, 1813
 examination, 664–665
 flaps, 1790, 1859–1860
 functions of
 fluid balance, 1801
 immune response function, 1802
 immune responses, 1802
 protection, 1801
 sensation, 1801
 temperature regulation, 1801–1802
 vitamin production, 1802
 fungal infections, 1804, 1813, 1838
 genetic factors influencing, 1804c
 glands, 1800
 glands of, 1800–1801
 grafts, 1859
 hair, 1799f, 1800
 assessment, 1811–1812
 HIV infection and, 1813
 integrity
 in acute pancreatitis, 1432
 altered, 318
 blistering disorders, 1847
 radiation-associated impairment, 349
 wound care and, 1885
 Kaposi sarcoma, 1859, 1859
 laser treatment of, 1860–1862
 layers, 1799–1800, 1799f
 lesions, 350
 assessment of, 1806–1809
 configurations, 1809f



- Skin (*continued*)
 primary, 1806t–1808t
 secondary, 1806t–1808t
 terminology related to, 1808
 malignant skin tumors, 1852–1859
 basal cell carcinoma, 1852–1855, 1853f
 melanoma, 1855–1859, 1855f
 squamous cell carcinoma, 1852–1855
 metastatic skin tumors, 1859
 nails, 1800
 inspection, 1809, 1810f
 of older adults, 1802
 parasitic infections, 1835
 pediculosis, 1838–1840
 scabies, 1840–1841
 postsurgical complications, 456t
 preparation for surgery, 411–412
 protection of, 1801, 1816
 rash, 1087, 1806
 secondary infections, 1816, 1834
 vascularity and hydration, 1809
 viral infections
 herpes simplex, 1838
 herpes zoster, 1836–1838, 1837f
- Skin contamination poisoning, 2204
- Skin disorders
 medical management of, 1819
 pharmacologic therapy, 1819–1821
 nursing management for, 1821
 wound dressing care for, 1816
- Skin infections, 1812–1813
- Skin preparation, 676
 preoperative, 411
- Skin scrapings, 1813
- Skin tests, 1044–1045
- Skin traction, 1175
 Buck's extension traction, 1175
 buck's extension traction, 1175
 nursing interventions, 1175
- Skull fractures, 2056–2058
- Sleep, age-related changes, 173
- Sleep apnea, aging and, 173
- Sleep-disordered breathing (SDB), 662
- Sleep hygiene, 178
- Sleeve gastrectomy, 1354
- Sleeve resection, 581
- Sling, 1152, 1154
- SLIT. *See* Sublingual immunotherapy
- Slit-lamp examination, 1901
- Slough
 definition of, 1815
 tissue injury and, 1828
- Small bowel obstruction, 1303–1304
 assessment and diagnostic findings, 1304
 clinical manifestations, 1303
 medical management, 1304
 nursing management, 1304
 pathophysiology, 1303
- Small bowel studies, 1224
- Small-Carrion prosthesis, 1751
- Small-incision cholecystectomy, 1425
- Small intestine, 1208, 1209
 function, 1209
 tumors of, 1283–1284
 assessment and diagnostic findings, 1283
 benign tumors, 1283
 clinical manifestations, 1283
 malignant tumors, 1283
 management, 1283–1284
- Smallpox, 2234
 clinical manifestations of, 2234
 treatment of, 2234
- Small-volume nebulizer (SVN), 603, 616
- SMBG. *See* Self-monitoring of blood glucose (SMBG)
- Smegma, 1775
- Smell, age-related changes, 171t, 176
- Smoke evacuators, 423
- Smoke inhalation, 1872
- Smokeless tobacco products, 306
- Smoking, 605
 carcinogenesis and, 304
 and chronic pancreatitis, 1436
 respiratory diseases and, 171
- Smooth muscle, thermal energy, 643
- Smooth muscle relaxants, for esophageal spasm, 1254
- Snakebites, 2200
 clinical manifestations, 2200–2201
 management, 2201
- Snellen chart, 1899, 1900
- Social histories, 474
- Social services, older adults, 189
- Social support, 662
- Society of Critical Care Medicine (SCCM), 1246
- Socioeconomics, Pulmonary health and, 475c
- Sodium, dietary, 807c
- Sodium bicarbonate
 in cardiopulmonary resuscitation, 814t
 and hyponatremia, 242
 IV administration, 247
- Sodium citrate, 431
- Sodium deficit, 239
- Sodium excess, 241
- Sodium-glucose co-transporter 2 (SGL-2)
 inhibitors, 1506t
- Sodium imbalance, 239–243
 hyponatremia, 241–243
 hyponatremia, 239–241
- Sodium iodide, for hyperthyroidism, 1464t
- Sodium nitroprusside, 839
- Sodium–potassium pump, 228
- Sodium restriction, in ascites, 1403
- Sodium salicylate, in rheumatic diseases, 1072t
- Soman, 2236
- Somatic pain, 199t
- Somatosensory evoked responses (SERs), 1990
- Somatostatin, 1025
- Somogyi effect, 1502, 1503c
- Sorafenib, 1405
- Sotalol, for ventricular tachycardia, 706
- Spacers, 615
- Spasticity, 1966, 1980
 definition of, 2084
 spinal cord injuries and, 2080
- Spastic muscle, 1822
- Spatial orientation, 1906
- Specific gravity, 1534, 1538
- Specificity, 1039
- Specimen collection, 2213
- SPECT. *See* Single photon emission computed tomography (SPECT)
- Speculum examination, 1651
- Speech disorders, 2127
- Speech therapy, 517
- Spermatic granuloma, 1775
- Spermatogenesis, 1743, 1744
- Sperm banking, 1775
- Spermicides, 1662
- Spherocytes, 909, 927
- Sphincter of Oddi, 1365, 1417
- Spice, 2205
- Spider angioma, 1368, 1368f, 1811t
- Spider bites, 2202
- Spinal anesthesia, 429
 continuous, 429
 injection sites for, 428f
- Spinal cord, 1971
- Spinal cord compression, 361t
 management of, 361t
 manifestation of, 361t
- Spinal cord injuries (SCI), 2055, 2070
 categories, 2070
 complications of, 2075–2076
 effects of, 2071c
 emergency management, 2073–2074
 functional abilities by level, 2074t
 long-term complications of, 2081
 oncologic disorders, 2112
 prevention of, 2070
 traction, 2075
 tumors, 2112
 worksheet for classification, 2072f–2073f
- Spinal deformity, 2132
- Spinal nerves, 1972–1973
- Spinal tracts, 1971
- Spinocerebellar ataxias, 128t
- Spiritual assessment, preoperative, 407
- Spiritual beliefs
 preoperative assessments, 407
 respect for, 411
- Spiritual care, 383–384
- Spiritual issues, end-of-life care and, 383c
- Spirituality, 71, 78, 367, 383
 assessment of, 383–384, 383c
 definition of, 383
 features of, 383
- Spirometry, 607
- Spironolactone, 1483
 for ascites, 1373
- Spleen, 890, 895, 920t
- Spleen cells, 330, 330f
- Splenectomy, 895, 934, 968–969
- Splenomegaly, 950, 953, 969
- Splints, 1152, 1167–1168
 advantages of, 1167
 home care checklist, 1170c
 immobilized lower extremity, 1171
 immobilized upper extremity, 1170–1171
- Spondyloarthropathies, 1088–1089
 ankylosing spondylitis, 1088
 nursing management, 1089
 pharmacologic management, 1089
 psoriatic arthritis, 1088–1089
 reactive arthritis, 1088
 surgical management, 1089
- Spondylosis, 2112, 2134
- Spongiform, 2093
- Spontaneous abortion, 1664
- Spontaneous bacterial peritonitis (SBP), 1297, 1394
- Spontaneous mutations, 120–121
- Sports-related musculoskeletal trauma, 1193
- Sprain, 1152, 1153
- Sprays, wound care, 1820
- Sputum production, 473, 606
 assessment of, 473
 chronic bronchitis, 603–604
- Sputum studies, 488



- Squamous cell carcinoma (SCC), 1852–1855, 1853f
- SQV. *See* Saquinavir
- SSM. *See* Superficial spreading melanoma
- St. Louis encephalitis, 2093
- Stages of Change Model, 64
- Staging, definition, 302, 312
- Standard Days method, 1663
- Standard precautions, 898, 1011, 1012c, 2145, 2150, 2152c, 2234
- Stapedectomy, for otosclerosis, 1952, 1952f
- Staphylococcus aureus*, 422, 499, 632, 1316, 1691, 1927
- bone infections, 1142
 - cardiac surgical infections, 753
 - cellulitis, 861
 - external otitis, 1947
 - parotitis, 1234
 - sickle cell disease, 921
 - transmission of, 2145
 - wound infections, 456
- Stapled hemorrhoidopexy, 1335
- Stasis dermatitis, 1812
- Stasis syndromes, 1296t
- Static support devices, 1827
- Statins, 730, 750, 1587
- affect lipoprotein metabolism, 731t
 - in arteriosclerosis, 828
 - cholesterol-lowering medications, 672
 - in ischemic stroke, 2036
 - for peripheral arterial disease, 835
 - rhinitis and, 495
- Status asthmaticus, 634, 642–643
- assessment, 642
 - clinical manifestations, 642
 - diagnostic findings, 642
 - medical management, 642–643
 - nursing management, 643
 - pathophysiology, 642
- Status epilepticus, 1993, 2014, 2024, 2025–2026
- Stavudine (d4T), 1018t
- Steady state
- control of, 104–105
 - definition of, 97, 98
- Steatorrhea, 1266, 1271, 1287, 1306, 1358, 1416, 1437
- Stem cells, 326, 328, 995–996
- bone marrow, 88, 987
 - leukemias, 951
- Stenosis, 837
- aortic, 766f, 769–770
 - definition of, 765, 766
 - mitral, 766f, 768–769
 - tracheostomal, 521
- Stent
- coronary artery, 746–747
 - definition of, 725
 - drug-eluting, 747
 - flexible, 829f
 - stent grafts, 829
- Stereotactic body radiotherapy (SBRT), 317
- Stereotactic core biopsy, 1709, 1715t, 1716
- Stereotactic radiation therapy, for pituitary tumors, 1451
- Sterile drapes, 422, 423f
- Sterile technique, 416, 422–423
- Sterilization, 1659f, 1660, 1660t
- Sterilization reversal, 1775
- Sternal fractures, 590–591
- Steroid hormones, 1447
- Steroid-induced acne, 1820
- Stevens–Johnson syndrome (SJS), 1848–1851
- Stimulation tests, 1448
- Stoma, 1228, 1249, 1322–1323. *See also*
- Urinary diversions
 - inspection of, 1629, 1630
 - ischemia and necrosis, 1634–1635
 - retraction and separation, 1635
- Stomach, 1208, 1209, 1210
- Stomatitis, 336, 349, 1231, 1236
- associated with chemotherapy agents, 323
 - definition of, 302, 1228
 - nursing diagnosis, 340c–341c
- Stool
- blood in, 661
 - characteristics, 1214
 - color, 1215t
 - elimination of, 1212
 - tests, 1217
- Stool charts, 1292
- Straight-leg raising test, 2137
- Straight or running traction, 1174
- Strain, 1152, 1153–1154
- Streptococcus pneumoniae*, 499, 530, 977, 2147t
- community-acquired pneumonia, 532, 532t
 - meningitis and, 2089–2090
- Streptococcus pyogenes*, 499, 992–993, 1835
- Streptozocin, 321t
- Stress
- adaptation to, 98
 - appraisal responses, 100
 - assessment, 104c
 - brain interpretation of, 101–103
 - cellular levels of, 104–109
 - coping, 100
 - and coping responses, 78c, 83
 - definition of, 98
 - enhanced coping strategies, 111, 111c
 - health patterns, role in, 113–114
 - hypothalamic-pituitary response, 101, 103
 - immunological response, 103
 - indicators of, 103–104
 - maladaptive responses to, 103
 - nursing management, 109–113
 - overview, 99–104
 - physiological responses to, 100–103, 102f
 - relaxation techniques, 111–112
 - as stimulus for disease, 99
 - sympathetic adrenal-medullary response, 101, 102t
 - sympathetic nervous system response, 101, 102t
- Stress incontinence, 1604, 1611t, 1612. *See also* Urinary incontinence
- Stress management
- definition of, 56
 - education, 112
 - and health promotion, 65
- Stressor
- definition of, 98
 - types of, 99
- Stress Overload Scale (SOS), 99
- Stress-related gastritis, 1267
- Stress testing, cardiac, 677–678
- exercise stress testing, 677
 - pharmacologic stress testing, 677–678
- Stress tolerance, 663–664
- Stress ulcers, 1271–1272
- Striae, 1815, 1820
- Strictureplasty, laparoscope-guided, 1309
- Stridor, 462, 471
- Stroke
- assistive devices to enhance self-care, 2043c
 - home care check list, 2053c
 - hypertension and, 865
 - ischemic. *See* Ischemic stroke
 - left hemisphere, 2035t
 - neurologic deficits, 2034t
 - right hemisphere, 2035t
 - sickle cell disease and, 921
 - types of, 2031, 2032t
- Stroke volume (SV), 651, 655
- cardiac output, effect of, 655–656
- Stroma, bone marrow, 885
- Stromal cell tumors, 1701
- Strongyloidiasis, 1296t
- Struvite stones, 1621
- ST segments, 674, 675, 691, 694
- Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments (SUPPORT), 370
- Styler, 894, 1754
- Subarachnoid hemorrhage, 2049
- Subchondral bone, 1067, 1090, 1113, 1122
- Subclavian steal syndrome, 837
- Subculture, 176
- Subcutaneous emphysema, 597–598
- Subcutaneous immunoglobulin (SCIG), 1007
- Subcutaneous immunotherapy (SCIT), 1053
- Subcutaneous tissue, 1799, 1799f, 1800–1801
- Subdural hematomas (SDHs), 2056
- Sublingual immunotherapy (SLIT), 1053
- Subluxation, 1152, 1154
- Substance abuse, 79, 80, 113, 2205–2210. *See also* Alcohol abuse
- acute alcohol intoxication, 2205, 2210
 - alcohol withdrawal syndrome, 2210
 - older adults and, 181
 - rehabilitation issues, 152
- Substance use disorder (SUD). *See* Substance abuse
- Substantia nigra, 2122, 2123f
- Subtotal thyroidectomy, 1467
- Succinylcholine, 426t
- Sucralfate
- for gastritis, 1269t
 - for GERD, 1258t
- Sudden cardiac death, 725, 727
- Sudomotor neuropathy, 1524
- Sufentanil, 426t
- Suicidal depression, 2129
- Suicide
- assisted, 387
 - older adults, risk in, 181
 - physician-assisted, 386
- Sulfasalazine
- in inflammatory bowel disease, 1308
 - in psoriatic arthritis, 1089
 - in rheumatic diseases, 1072t
- Summation gallop, 651, 670
- Superficial inferior epigastric artery flap (SIEA), 1737
- Superior mesenteric artery syndrome, 1171
- Superior vena cava (SVC), 278
- Superior vena cava syndrome (SVCS), 360t
- Supination, 41c
- SUPPORT. *See* Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments
- Suppression tests, 1448
- Suppressor T cells, 993



- Suprapubic catheters, 1604, 1616, 1618, 1618f, 1753
- Suprapubic prostatectomy, 1762, 1764f, 1764t
- Supratentorial approach, 2010t, 2011–2016
- Supraventricular tachycardia (SVT), 705
- Surgeons, 420
- Surgery
- adverse effects of, 418c
 - ambulatory, 396, 397, 400, 410
 - biopsy, 313, 1716–1717
 - for cancer, 312–315
 - categories of, 399t
 - complications, 402c, 430–435
 - diagnostic, 312–313
 - discharge after, 444, 444c, 2015c
 - emergency, 400–401
 - environment for, 421–424
 - gerontologic considerations, 399–400
 - informed consent, 401, 401c
 - intracranial, 2010–2016, 2010t
 - intraoperative nursing, 417–436
 - laparoscopic, 313
 - minimally-invasive, 313
 - nursing management after, 445, 445c
 - nursing process, 432–435
 - palliative, 314–315, 315t
 - patient recovering from, 446–458
 - position for (on operating table), 433–435, 434f
 - as primary treatment for cancer, 313–314
 - prophylactic, 314
 - radical, 313
 - reconstructive, 315
 - risks involved in, 314
 - safety checklist, 419f
 - salvage, 313–314
 - skin preparation for, 1698
 - verification procedures, 413
 - video-assisted endoscopic, 313
- Surgical abdomen, 1297
- Surgical asepsis, 416
- environmental controls, 422
 - guidelines, 422–423
 - principles of, 422–423
- Surgical attire, 421–422
- Surgical biopsy, 1709, 1716–1718
- Surgical débridement, 502, 856, 1143, 1882
- Surgical drains
- care of, 452
 - types of, 452f
- Surgical site exposure, 423f
- Surgical team, 417–420
- Surveillance, Epidemiology, and End Results registry (SEER), 1325
- Susceptible, 2145
- Susceptible host, 2145
- Suspensions, definition of, 1815, 1819
- Sustainability planning, 2219
- Sustained maximal inspiration. *See* Incentive spirometry
- Sutures (Perclose, Techstar), 682
- SVC. *See* Superior vena cava
- SVCS. *See* Superior vena cava syndrome
- SVT. *See* Supraventricular tachycardia
- Swallowing, 1210, 2014, 2044
- aging and, 173
 - difficulties, 2034t, 2039–2040. *See also* Dysphagia
- Sweat, 1801
- Sweat glands, 1799f, 1801
- Sweeteners, 1496
- Sympathetic nervous system, 1801, 1966, 1973–1975
- catecholamine release, 1870
 - response to stress, 101, 102t
- Sympathetic ophthalmia, 1897, 1925, 1931
- Synarthrosis joints, 1099
- Synchronized intermittent mandatory ventilation (SIMV), 527, 561, 561f, 562
- Syndrome of inappropriate antidiuretic hormone (SIADH), 257, 323, 1445, 1452, 2014, 2052
- associated with sodium imbalance, 239
 - hypertonic saline solution, administration of, 240
- Synovectomy, 1080
- arthroscopic, 1117
- Synovium, 1078, 1090, 1097, 1100, 1111
- Synthetic levothyroxine, for hypothyroidism, 1457
- Synthetic vitamin A acids, 1833
- Syphilis, 2147t, 2168–2169
- assessment, 2168–2169
 - diagnostic findings, 2168–2169
 - medical management, 2169
 - nursing management, 2169
 - patient education, 2169c
 - stages of, 2168
- Systemic inflammatory response syndrome (SIRS), 273, 292
- Systemic lupus erythematosus (SLE), 1082–1085
- assessment, 1083–1084
 - butterfly rash of, 1083f
 - clinical manifestations, 1082–1083
 - diagnostic findings, 1083–1084
 - medical management, 1084
 - nursing management, 1084–1085
 - pathophysiology, 1082
 - pharmacologic therapy, 1084
- Systemic medications, 1821
- Systemic radiotherapy (radiopharmaceutical therapy), 318
- Systemic side effects, 318
- Systemic vascular resistance, 651, 656
- Systole, 691
- Systolic blood pressure (SBP), 295t, 731, 865
- Systolic click, 670
- Systolic heart failure, 793, 795. *See also* Heart failure
- T**
- Tabun, 2236
- Transarterial chemoembolization (TACE), 1405
- Tachypnea
- description of, 471
 - patterns, 479t
 - physical assessment, 477
- Tacrolimus, 246, 328, 779, 780, 1058, 1408, 1410, 1598t
- Tactile fremitus, 85, 480–481, 480f
- Tadalafil, for erectile dysfunction, 1749t, 1750, 1750t
- Tamm–Horsfall protein, 1548
- Tamoxifen, 1695
- in breast cancer, 1721, 1733–1734, 1734f
 - and uterine cancers, 1697
- Tampons, 1655
- Tampon test, 1687
- Tamsulosin, for BPH, 1754
- Tapentadol, 214
- Targeted therapies, 130
- biologic response modifiers therapy, 333–334
 - for breast cancer, 1734–1735
 - definition of, 302
 - for gastric cancer, 1279
 - gene therapy, 333–334
 - nursing management, 333
 - therapeutic and adverse effects, 333
- Taste
- age-related changes, 171t, 176
 - impairment of, 350
- Taxanes, 321t, 1732
- Tazarotene, for psoriasis, 1843
- T cells. *See* T lymphocytes
- Teaching
- definition of, 58
 - group, 60
 - nursing function of, 57, 61
 - plan formulation, 61–63
 - teaching aids, 60
 - techniques, 60
- Teaching aids, 60
- Teaching-learning process
- assessments, 61
 - evaluation, 63
 - implementation, 63
 - planning, 61–63
- Teamwork, surgical teams, 417–420
- Technology
- and end-of-life care, 369
 - genetic and genomic, 125–127
- Technology Informatics Guiding Education Reform (TIGER) initiative, 8
- Telangiectasias, 1809
- Telehealth, use of, 8, 50
- Telemetry
- ECG monitoring, 674, 675
 - transmitters, 677
- Teleologic theory, 24–25
- Teletherapy, for prostate cancer, 1756
- Telmisartan, for hypertension, 872t
- Temozolomide, 2117
- Temperature, regulation of
- burn injuries and, 1873
- Temporal lobes, tumors of, 1968, 1968f, 2091c
- Temporomandibular disorders, 1233–1234
- assessment and diagnostic findings, 1233
 - causes, 1233
 - clinical manifestations, 1233
 - medical management, 1233–1234
- TEN. *See* Toxic epidermal necrolysis
- Tendonitis, 1117
- Tendons, 1097, 1117
- injuries to, 1153, 1157
- Tenecteplase, 843
- for venous thromboembolism, 849t
- Tenesmus, 1291
- Teniposide, 321t
- Tenofovir, 1018t
- Tenorrhaphy, 1080
- Tension pneumothorax, 593–594
- Terazosin
- for benign prostatic hyperplasia (BPH), 1754
 - for hypertension, 874t
- Terconazole cream
- for candidiasis, 1678
- Teriflunomide, 2097
- Terminal illness
- confusion and, 381
 - definition of, 389



- hope and, 382
- spiritual care, 383–384
- Terrorism, 2219
 - and mortality, 2219
 - preparedness and response
 - decontamination, 2229
 - personal protective equipment, 2227–2229
 - recognition and awareness, 2227
- Tertiary prevention, 309
- Testes, 1744, 1744f
- Testicular cancer, 1771–1774
 - assessment and diagnostic findings, 1771–1773, 1772c
 - clinical manifestations, 1771
 - germinal, 1771
 - medical management, 1773
 - nongerminial, 1771
 - nursing management, 1773–1774
 - risk factors for, 1771
 - secondary, 1771
 - side effects with treatment for, 1773
- Testicular self-examination (TSE), 1746–1747, 1771, 1772c
- Testicular torsion, 1770–1771
- Testosterone, 1744
 - effects on bone remodeling, 1099
- Tetanus
 - prophylaxis, 2191
 - in snakebites, 2202
- Tetany, 1472–1473
 - hypocalcemia and, 248
 - latent, 1473
 - overt, 1473
- Tetrabenazine, 2129
- Tetracaine, 429t
- Tetracycline
 - for gastritis, 1269t
 - in hidradenitis suppurativa, 1831
- Tetraplegia, 1976
- Thalamotomy, 2124
- Thalassemia major, 926
- Thalassemias, 925–926
 - alpha-thalassemias, 925–926
 - beta-thalassemia, 926
 - treatment of, 926
- Thalidomide, 963, 978t, 980, 1059
- The bends. *See* Decompression sickness
- Theophylline, 432
 - asthma treatment, 636t, 639
 - toxicity, 250
 - avoid during stress testing and, 678
- Therapeutic communication
 - in palliative care and, 369, 375
 - techniques, 15t
- Therapeutic regimen
 - adherence to, 57–58
 - chronic illness and, 160
 - definition of, 57
 - for heart failure, 808
 - management at home, 49c
 - nonadherence to, 1054–1055
 - in pneumonia, 539–540
- Therapeutic vaccines, 1756
- Thermistors, 685, 686f
- Thermoregulatory alterations
 - burn injuries and, 1873
- Thiamine deficiency, 179, 1384
- Thiazide diuretics
 - in diabetes insipidus, 1452
 - in heart failure, 800t
 - in hypervolemia, 237
 - in hypocalcemia, 250
 - for hypertension, 1410
 - pulmonary edema, 800
- Thiazolidinediones, 1504, 1506t
- Thin-layer Rapid Use Epicutaneous test (TRUE), 1057
- 6-Thioguanine, 321t
- Thiopental sodium, 427t
- Thiotepa, 321t
- Third-degree atrioventricular block, 709–710
- Third-degree burns, 1868, 1868f
- Third-degree strain, 1153
- Third-party payers, 52
- Thomas splint, 1176
- Thoracentesis
 - in empyema, 555
 - in pleural effusion, 554–555
- Thoracic aortic aneurysm, 839
- Thoracic injuries, halo/vest for, 2075f
- Thoracic surgery, 580–595, 581c, 592f
 - continuing and transitional care, 585
 - patient education, 586c
 - postoperative management, 582–589, 583c–585c
 - preoperative management, 580–582
- Thoracolumbar junction, 1193
- Thoraco-lumbar-sacral orthosis (TLSO), 1193
- Thoracolumbar spine, 1193
- Thoracoscopy, 491–492
 - endoscopic, 491, 491f
 - nursing interventions, 492
 - procedure, 491–492
 - video-assisted, 492
- Thoracotomy, 527, 580, 591c
 - home care, 587c
 - nursing care 583c–585c
 - nursing management of patient, 580
- Thorax
 - auscultation, 482–483
 - inspection, 477–479
 - landmarks, 478c
 - palpation, 479–481
 - percussion, 481, 481f
 - structures of, 464f
- 3-dimensional conformal radiation therapy (3D-CRT), 1280
- thrifty gene hypothesis, 1344
- Thromboelastography, 941
- Thrombin inhibitors, 849t, 939
- Thrombocytes. *See* Platelets
- Thrombocytopenia, 357, 932–933
 - assessment and diagnostic findings, 932
 - causes and management, 932t
 - clinical manifestations, 932
 - description of, 302
 - heparin-induced, 735, 939–940
 - medical management, 932–933
 - nursing management, 933
- Thrombocytosis, 932–933
 - secondary, 942
- Thromboembolism, 811
 - venous, 296, 315, 399, 455, 845, 1792
- Thrombolytic therapy, 740, 2036
 - administration of, 741c
 - in arterial embolism and arterial thrombosis, 843
 - in pulmonary embolism, 851, 852
- Thrombophilias, 946
- Thrombophlebitis, 369
- Thrombopoietin, 906c
- Thrombotic disorders, 942, 944–945
- Thrush, 1230t
- Thumbs rest, 1454
- Thymectomy, 2102
- Thyrocalcitonin. *See* Calcitonin
- Thyroglobulin, 1455
- Thyroid-binding globulin, 890
- Thyroid-binding hormones, 1453
- Thyroid cancer, 1467–1470
 - assessment and diagnostic findings, 1468
 - incidence of, 1467
 - lifestyle and risk of, 1468c
 - medical management, 1468–1469
 - nursing management, 1469–1470
 - complications management, 1469–1470
 - home, community-based, and transitional care, 1470
 - postoperative care, 1469
 - predischarge education, 1470
 - preoperative care, 1469
- Thyroid cartilage, 464, 465f, 1452f, 1454
- Thyroidectomy, 1446, 1455
- Thyroid gland, 1452
 - anatomy, 1452
 - calcitonin, 1453
 - diagnostic evaluation, 1454
 - fine-needle aspiration biopsy, 1455
 - medications affecting test results, 1455, 1455c
 - radioactive iodine uptake test, 1455
 - serum free T₄, 1454
 - serum T₃ and T₄, 1454
 - serum thyroglobulin, 1455
 - serum TSH concentration, 1454
 - thyroid antibodies, 1454–1455
 - thyroid scan, radioscan, or scintiscan, 1455
 - T₃ resin uptake test, 1454
 - hormones of, 1452–1453
 - function of, 1452
 - regulation of, 1453, 1453f
 - synthesis of, 1453
 - hyperthyroidism, 1461–1467
 - hypothyroidism, 1455–1461
 - pathophysiology, 1453
 - physical examination, 1453–1454
 - thyroid cancer, 1467–1470
 - thyroid tumors, 1467
- Thyroid hormone, 1098, 1452–1453
 - calcitonin, 1453
 - drug interactions, 406t
 - function of, 1452
 - regulation of, 1453, 1453f
 - synthesis of, 1453
- Thyroiditis, 1446, 1455
- Thyroid-releasing hormone (TRH), 1453, 1453f
- Thyroid-stimulating hormone (TSH), 1446, 1450, 1453
- Thyroid storm, 1443, 1463, 1463c
- Thyroid tumors, 1467
- Thyrotoxicosis, 1446, 1461, 1463c
- Thyroxine (T₄), 1446, 1452. *See also* Thyroid gland
- Thyroxine-binding globulin (TBG), 1453, 1454
- TIA. *See* Transient ischemic attack
- Tibia, 1192
- Tick bites, 2202, 2202f
- Tidal volumes, 467t, 480, 485
- Time, attitude towards, 94
- Timed voiding, 1614c
- Timolol, for hypertension, 873t



- Tinea, 1838, 1839t
 Tinidazole, for trichomoniasis, 1679
 Tinnitus, 1940, 1957
 Tipranavir, 1020t
 TIPS. *See* Transjugular intrahepatic portosystemic shunt
 Tirofiban, 661
 Tissue integrity, in cancer, 336–350
 Tissue perfusion, 236, 275
 during cardiac surgery, 742, 761–762
 cerebral
 maintaining, 2012–2013
 optimizing, 2005, 2051–2052
 decreased, 1822
 improving, 1827
 maintaining adequate, 761–762
 mean arterial pressure and, 275
 monitoring of, during shock, 277–278
 Tizanidine, 2042, 2084, 2097
 TLC diet. *See* Therapeutic Lifestyle Changes diet
 T lymphocytes, 308, 888t, 889, 930. *See also*
 Cellular immune response
 in aplastic anemia, 916–917
 function of, 889, 1039
 types of, 993
 Tobramycin, 644, 665
 Tocilizumab, 1073t
To Err Is Human: Building a Safer Health System
 (IOM report), 9
 Tolerance, 197, 211, 212, 806, 987
 Tolvaptan, 241, 1562
 Tongue, 1215
 Tongue turgor, 236
 Tonicity, 227–228
 Tonometry, 1901–1902
 Tonsillitis, 494, 505–506
 clinical manifestations, 505
 diagnosis of, 505
 medical management, 505
 postoperative care, 506
 Tonsils, anatomy, 463–464
 Tooth decay, 1229, 1232
 Tophi, 1089, 1090
 Topical corticosteroids
 for atopic dermatitis, 1057
 for pruritus, 1830
 with topical nasal decongestant, 1052
 for vulvar dystrophy, 1691
 wound care, 1820, 1820t
 Topoisomerase I inhibitors, 321t
 Topoisomerase II inhibitors, 321t, 978t
 Topotecan, 321t
 Torsades de pointes, 694, 707
 Torsemide, 237
 for hypertension, 873t
 Total hip arthroplasty (THA), 1126–1133
 avoiding hip dislocation, 1131c
 home care after, 1132c
 nursing interventions, 1127c–1129c
 gerontologic considerations, 1133
 hip prosthesis, 1130, 1130f
 home, community-based, and transitional care, 1132–1133, 1132c
 infection prevention, 1131–1132
 monitoring wound drainage, 1130–1131
 promoting ambulation, 1130
 VTE prevention, 1131
 patient education, 1131c
 Total hysterectomy, for cervical cancer, 1696c, 1702
 Total joint arthroplasty, 1124
 Total joint replacement. *See* Total joint arthroplasty
 Total knee arthroplasty (TKA), 1125, 1134
 nursing interventions, 1134
 postoperative, 1134
 preoperative telephone support, 1126c
 Total nutrient admixture (TNA), 1314
 Total pancreatectomy, 1441
 Total thyroidectomy, 1467
 Total urinary incontinence. *See* Urinary incontinence
 Touch, attitude towards, 94
 Touriquet, 1063t, 1119, 2189–2190
 pneumatic, 1125
 pseudohyperkalemia and, 246
 Toxic epidermal necrolysis (TEN), 1848–1851
 clinical manifestations, 1849
 complications, 1849
 diagnosis of, 1849
 drug hypersensitivity and, 1058–1059
 medical management, 1849
 nursing process, 1849–1851
 Toxic hepatitis, 1391
 Toxic nodular goiter, 1464–1465
 TP interval, 694
 Trabeculae, 1097, 1098
 Trachea, anatomy, 425f, 464
 Tracheoesophageal puncture, 517, 517f
 Tracheostomal stenosis, 521
 Tracheostomy collars, 612f
 Tracheostomy tube, 519, 527
 in acute respiratory failure, 557–558, 558f
 complications associated with, prevention of, 558c
 disadvantages of, 557
 vs. laryngectomy tubes, 516
 removal of, 570
 Tracheotomy, 527, 557–559
 Trachoma
 conjunctivitis, 1927
 definition, 1897, 1927
 Traction, 1173–1178, 1174f
 balanced suspension, 1174–1175, 1174f
 Buck's extension, 1175
 effective, principles of, 1174
 goal of, 1173
 manual, 1175
 patient in, nursing management of, 1177–1178
 skeletal, 1174, 1176–1177
 skin, 1174, 1175
 straight/running, 1174
 types of, 1174–1175
 Tramadol, 214
 Trandolapril, for hypertension, 872t
 Tranquilizers, 406t, 1954
 Transarterial chemoembolization (TACE), 1405
 Transbronchial brushing, 492
 Transbronchial needle aspiration, 492
 Transcatheter Arterial Embolization (TAE), 1276, 1406
 Transcranial Doppler, 1988
 Transcultural nursing, 72
 Transcutaneous electrical nerve stimulation (TENS), 924, 1123, 1155
 Transdermal contraceptives, 1661
 Transducer-tipped catheter, 2002
 Transection, 1380
 Transesophageal echocardiography (TEE), 680–681
 Transfusion, 899–907
 complications, 901
 acute hemolytic reaction, 902–903
 allergic reaction, 903
 bacterial contamination, 904
 delayed hemolytic reactions, 904
 disease acquisition, 904, 905c
 febrile nonhemolytic reaction, 901–902
 transfusion-associated circulatory overload, 903–904
 transfusion-related acute lung injury, 904
 informed consent for, 900, 900c
 long-term, 905, 905t
 nursing management for transfusion reactions, 905–906
 of packed red blood cells, 901c
 and patient education, 901
 pharmacologic alternatives to, 906–907, 906c
 of platelets or fresh-frozen plasma, 902c
 pretransfusion assessment
 patient history, 900
 physical assessment, 900
 procedures, 901, 901c
 setting for, 899
 sickle cell disease and, 919
 Transfusion-associated circulatory overload (TACO), 903–904
 Transfusion dependence, 963
 Transfusion-related acute lung injury (TRALI), 903, 904
 Transient flora, 2145
 Transient ischemic attack (TIA), 1000, 2035
 Transitional care
 components of, 35c
 definition of, 35
 nurse as coordinator of, 35–36
 Transitional care nurse, 48, 163
 Transitional services, 2184
 Transjugular intrahepatic portosystemic shunt (TIPS)
 for ascites, 1374, 1374f
 for variceal bleeding, 1378f, 1379
 Translation services, 27
 Transmissible spongiform encephalopathies (TSE), 2093
 Transmission-based precautions, 2145, 2151
 Transrectal ultrasound (TRUS), 1747
 Transsacral (caudal) block, 429
 Transsphenoidal approach, 2010t, 2016
 Transtheoretical Model of Change, 64, 64t
 Transthyretin, 1453
 Transtracheal oxygen catheter, 611f, 614
 Transurethral incision of prostate (TUIP), 1755, 1762, 1763t, 1764f
 Transurethral microwave thermotherapy (TUMT), 1755
 Transurethral needle ablation (TUNA), 1755
 Transurethral resection of the prostate (TURP), 1755
 Transurethral resection syndrome, 1762, 1765c
 Transvaginal surgical mesh, 1688
 Transvaginal/transrectal electrical stimulation, 1614c
 Transvaginal ultrasound, for ectopic pregnancy, 1669–1670
 Transverse rectus abdominal myocutaneous (TRAM) flap, 1736, 1736f
 Trapeze, 1176
 Trastuzumab, 330, 1279, 1734
 Trauma, 2191–2196



- chest, 589–598
 blunt trauma, 589–592
 penetrating trauma, 592–593
 traumatic pneumothorax, 593
 forensic evidence, 2191–2192
 genitourinary, 1625–1626
 bladder trauma, 1625–1626
 ureteral trauma, 1625
 urethral trauma, 1626
 injury prevention, 2192
 mechanical, 107–108
 ocular trauma, 1924–1926
 orbital, 1923–1924
 multiple, 2192–2196
 renal, 1600–1602
 of upper respiratory airway, 510–524
 Traumatic brain injuries (TBI), 2056, 2066
 body temperature maintaining, 2064
 closed (blunt), 2058
 home care checklist, 2069, 2069c
 management of, 2057–2058
 mild, 2060
 multisystem assessment, 2063t
 nursing process, 2061–2069
 pathophysiology of, 2056–2057, 2057f
 penetrating, 2058, 2193
 prevention of, 2065–2066
 skin integrity, maintaining, 2066
 veterans considerations, 2057
 Traumatic pneumothorax, 593
 Travel, infectious diseases and, 2176
 Tremors, Parkinson's disease, 2123, 2123f
 Trench mouth. *See* Necrotizing gingivitis
 Trendelenburg position, 434, 434f, 1315
 Treponemal tests, 2169
Treponema pallidum, 2169
 TRH. *See* Thyroid-releasing hormone
 Triage, 2185–2187, 2222–2223
 assess and intervene, 2186–2187
 categories during mass casualty incident, 2223t
 emergent, 2185
 nonurgent, 2185
 protocols, 2185–2186
 urgent, 2185
 Triamcinolone, 500t, 1050, 1483t
 Triamcinolone acetate, 1820t
 Triamterene, 1395
 for hypertension, 873t
 Triceps reflex, 1982–1983
 Trichiasis, 1897, 1901, 1927
 Trichloroacetic acid, 1681
 Trichomoniasis, 1679, 1752
 Tricuspid area, 668
 Tricuspid valve
 anatomy of, 766
 Tricyclic antidepressants (TCAs), 217, 1115
 body weight and, 1346c
 for depression, 181
 in fibromyalgia, 1091
 overdose of, 2209t
 Trigeminal nerve (CN V), 2107t
 branches, distribution of, 2108f
 microvascular decompression of, 2108–2109
 Trigeminal neuralgia, 2107t, 2108–2109
 Triglycerides, 672, 674, 727, 1211t
 Triiodothyronine (T₃), 1446, 1452. *See also*
 Thyroid gland
 Trimethoprim-sulfamethoxazole, 1025
 in impetigo, 1835
 for urinary tract infections, 1608t
 Triptans, 2028–2029
 Tropical sprue, 1296t
 Troponin, 725, 739
 Trousseau sign, 248, 249f, 252, 1446, 1473
 Truth-telling, 28
 Trypsin, 1210, 1417
 TSE. *See* Testicular self-examination
 TSH. *See* Thyroid-stimulating hormone
 Tubal embryo transfer (TET), 1668
 Tubal ligation (female sterilization), 1659c, 1659f, 1660,
 Tuberculin (TB) skin test, 548, 1079
 Tuberculosis (TB), 2147t. *See also*
Mycobacterium sp.; *See also* pulmonary
 tuberculosis
 HIV infection and, 1022
 immigration and, 2176
 Tuberculous peritonitis, 1298
 Tubo-ovarian abscess, 1685
 TUIP. *See* Transurethral incision of prostate
 Tularemia, 2233t
 Tumor
 antigen-antibody complexes, 308
 benign vs. malignant, 303t
 brain, 2113–2118
 brain, primary
 home care checklist, 2120c
 nursing process, 2118–2121
 types of, 2113–2114
 grading, 309–312
 orbital and ocular, 1929–1931
 radiosensitive, 316
 removal, 2121
 spinal cord, 2121–2122
 staging, 302, 309–312, 1855
 surgical techniques for, 314t
 Tumor-associated antigens (TAAs), 308, 1405, 1700
 Tumor lysis syndrome, 329, 974
 management of, 362t
 manifestation of, 362t
 Tumor necrosis factor-alpha (TNF- α)
 for psoriasis, 1844
 Tumors of head of pancreas, 1440–1442
 assessment and diagnostic findings, 1441
 clinical manifestations, 1441
 continuing and transitional care, 1442
 medical management, 1441
 nursing management, 1441–1442
 self-care, 1442
 TURP. *See* Transurethral resection of the
 prostate
 T wave, 691, 694
 Tympanic membrane, 1936, 1936f, 1937, 1937f, 1938, 1939, 1939f
 Tympanic membrane (TM) rupture, 2231–2232
 Tympanogram, 1942
 Tympanoplasty, 1950
 Type 1 diabetes, 1488, 1490
 Type 2 diabetes, 1488, 1490–1491
 Tyrosine kinase inhibitors, 332–333, 955, 1735
 Tzanck smear, 1813
U
 U-500 insulin, 1502
 Ulcer, 1807t
 Ulcerative colitis, 1307
 assessment and diagnostic findings, 1307
 complications, 1307
 pathophysiology, 1307
 Ulcerogenic tumor, 1442–1443
 Ulnar shaft, 1181
 Ultrafiltration, 804, 1555, 1578, 1584
 Ultrasonography, 313
 abdominal, 1217–1218
 bladder, 1549
 doppler, 824
 duplex, 825
 endoscopic, 1218
 Ultrasound-guided core biopsy, 1716
 ultraviolet-A (UVA), 1844
 Ultraviolet-B (UVB), 1844
 Unfractionated heparin, 293, 735
 Unicameral (single cavity) bone cysts, 1146
 Unintentional injuries, 1153
 United Network for Organ Sharing (UNOS)
 computer system, 1411
 United Ostomy Associations of America (UOAA), 1322, 1635
 United States Preventive Services Task Force (USPSTF), 1135
 Unna boot, 854
 Unrestricted zones, 421
 Upper airway infections, 495–508
 adenoiditis, 505–506
 laryngitis, 507–508
 peritonsillar abscess, 506–507
 pharyngitis, 503–505
 rhinitis, 495–497
 rhinosinusitis, 499–501
 tonsillitis, 505–506
 viral rhinitis, 497–499
 Upper airway injuries, burn-related, 1872
 Upper airway obstruction, 510
 Upper extremity arterial disease, 837–838
 assessment and diagnostic findings, 837
 clinical manifestations, 837
 medical management, 837
 nursing management, 837–838
 Upper extremity disorders, 1117–1119
 bursitis, 1117
 carpal tunnel syndrome, 1118
 Dupuytren disease, 1118–1119
 ganglion, 1118
 hand or wrist, surgery of, 1119
 impingement syndrome, 1117–1118
 loose bodies, 1117
 tendonitis, 1117
 Upper motor neuron, 1976, 1976t
 Upper respiratory tract disorders, 494–524
 obstruction and trauma, 510–517
 upper airway infections, 495–508
 Urea, 1566
 Urea nitrogen, 1534, 1549
 Uremia, 1555, 1559, 1570
 Uremic bone disease, 1571
 Ureteral colic, 1621, 1624
 Ureteral trauma, 1625
 Ureteroscopy, 1622
 Ureterovesical junction, 1536, 1537
 Ureterovesical/vesicoureteral reflux, 1604, 1605
 Ureters, 1536–1537
 Urethra, 1536–1537
 Urethral stricture, 1762
 Urethral trauma, 1626
 Urethritis, 1604, 1605
 Urethrocele, 1545
 Urethrovesical reflux, 1604, 1605
 Urge incontinence, 1604, 1612
 Urgency, 1542t
 Uric acid, 1537



- Uric acid stones, 1621, 1622
 Uricosuric agents, 1090
 Urinary bladder, 1536
 Urinary casts, 1555, 1560, 1567
 Urinary diversions, 1627–1632
 nursing process (postoperative)
 body image, improving, 1634
 complications management, 1634–1635
 pain relief, 1634
 sexuality issues, 1634
 skin integrity, 1634
 Urinary frequency, 1542
 Urinary incontinence, 1611–1616
 assessment and diagnostic findings, 1613
 behavioral therapy for, 1613
 nursing management, 1614–1616
 patient education, 1615c
 pharmacologic therapy for, 1613
 surgical management, 1613–1614
 types of, 1612
 Urinary retention, 1616–1617
 assessment and diagnostic findings, 1616
 complications, 1616
 nursing management, 1616
 home, community-based, and transitional care, 1616–1617
 urinary elimination, measures for, 1616
 pathophysiology, 1616
 Urinary stasis and infection, 1178
 Urinary tract, disorders of, 1604–1636
 adult voiding dysfunction, 1611–1620
 genitourinary trauma, 1625–1626
 urinary diversions, 1627–1636
 urinary tract cancers, 1626–1627
 urolithiasis and nephrolithiasis, 1620–1624
 Urinary tract infections (UTI), 1605–1611
 lower, 1605–1608
 clinical manifestations, 1606–1607
 diagnosis of, 1607
 pathophysiology, 1605–1606
 pharmacologic therapy, 1608
 upper, 1610–1611
 Urine
 blood in, 1601f
 culture, 1546–1548
 examination, 1548
 formation of, 1537
 ketone testing, 1499
 proteinuria, 1537
 sodium, 1537
 specific gravity, 1566t
 storage, 1540
 Urine dipstick, 1499
 Urine-specific gravity, 2063t
 Urinometer, 1548
 Urobilinogen, 1367
 Urofollitropin (Metrodin, Bravelle), 1667c
 Urokinase (Abbokinase)
 for venous thromboembolism, 849t
 Urolithiasis, 1620–1624
 assessment and diagnostic findings, 1621
 clinical manifestations, 1621
 medical management, 1621–1624
 pathophysiology, 1620–1621
 predisposing factors, 1621
 sites of calculi formation, 1620, 1621f
 surgical management, 1624
 Urologic endoscopic procedures, 1551–1552
 Uromodulin, 1548
 Uropathogenic bacteria, 1606
 Urosepsis, 1606
 Urothelium, 1536
 Ursodeoxycholic acid, 1422
 Urticaria (hives), 1046, 1059
 U.S. Department of Homeland Security, 2219
 U.S. Food and Drug Administration (FDA), 2029
 U.S. Preventive Services Task Force (USPSTF)
 on colorectal cancer screening, 1326
 Ustekinumab (Stelara)
 for psoriasis, 1089
 Uterine artery embolization (UAE), 1693
 Uterine bleeding, abnormal, 1658
 Uterine cancers
 oral contraceptives, 1671
 pathophysiology, 1697
 risk factors, 1697c
 Uterine fibroids, 1693
 Uterine prolapse, 1640, 1650, 1688–1690
 medical management, 1690
 nursing management, 1690
 patient education, 1690
 positions of uterus
 anteflexion, 1689f
 anteversion, 1689f
 retroflexion, 1689f
 retroversion, 1689f
 Uterine wall, 1642
 Uterotubography, 1655
 Utilitarianism, 25
 Uveitis, 1929
 U wave, 691, 694
V
 Vaccine Adverse Event Reporting System (VAERS), 2156
 Vaccine Information Statements, 2156
 Vaccine preventable diseases, 2156
 Vaccines
 allogeneic, 331
 autologous, 331
 hepatitis A, 1386
 hepatitis B, 1389
 human papillomavirus, 304, 998
 prophylactic, 314
 Vacuum aspiration, 1665c
 Vacuum-assisted closures (VAC), 1161
 Vagal blocking therapy, 1349
 Vagina, 1651
 inspection of, 1651
 palpation of, 1650
 Vaginal cancers, 1700
 diagnosis, 1700
 medical management, 1700
 risk factors, 1700
 vaginal pessaries and, 1700
 Vaginal cone retention exercises, 1614c
 Vaginal contraceptives, 1661
 Vaginal discharge, 1651, 1651t
 vaginitis and, 1677
 Vaginal fistulas, 1686–1687
 assessment and diagnostic findings, 1687
 clinical manifestations, 1687
 medical management, 1687
 rectovaginal fistula, 1687
 sites for, 1687f
 vesicovaginal fistula, 1686
 Vaginal stenosis, 1697, 1698
 Vaginitis, 1022, 1607
 Vagotomy, 1262, 1274t
 Vagotomy syndrome, 1262
 Valacyclovir
 for genital herpes, 1682
 for herpes zoster infection, 1836
 Valsalva maneuver, 777, 1243, 1546, 1937, 1949
 Value-based purchasing, 34
 Valve replacement, 772–775
 mechanical valves, 774, 774f
 nursing management, 775
 tissue valves, 774–775, 774f
 Valvular disorders, 766–767
 Valvular heart disease, and heart failure, 794
 Valvuloplasty
 balloon, 771–772, 771f
 nursing management, 775
 procedure, 775
 Vancomycin-resistant *Enterococcus* (VRE), 2155
 Vanillylmandelic acid (VMA), 1475
 Vardenafil, for erectile dysfunction, 576, 1749, 1750t
 Varenicline, 608
 Variable expression, 122
 Varicella-zoster virus (VZV), 1836–1838
 Varicocele, 1774
 Varicose veins, 858–860
 assessment and diagnostic findings, 858–859
 clinical manifestations, 858
 nursing management, 859–860
 pathophysiology, 858
 prevention and medical management, 859
 ligation and stripping, 859
 sclerotherapy, 859
 thermal ablation, 859
 Vasa recta, 1536
 Vascular access devices, 1579
 Vascular dementia, 186
 Vascular lesions, 1811t
 Vascular system, 818–822
 aging, effect of, 821
 anatomy of
 arteries and arterioles, 818–819
 capillaries, 819
 lymphatic vessels, 819
 veins and venules, 819
 diagnostic evaluation, 822
 computed tomography, 825
 contrast phlebography, 826
 Doppler ultrasound flow studies, 822–824, 823f
 Duplex ultrasonography, 825
 exercise testing, 825
 lymphoscintigraphy, 826
 magnetic resonance angiography, 826
 disorders of
 arterial disorders, 826–844
 cellulitis, 861
 lymphatic disorders, 860
 venous disorders, 844–860
 function of
 blood flow, 820
 blood pressure, 820
 capillary filtration and reabsorption, 820
 circulatory needs of tissues, 819
 hemodynamic resistance, 820
 regulatory mechanism, 820
 health history, 822
 lymphatic system, 818
 pathophysiology of, 821
 arterial and venous insufficiency, 821t



- blood and lymphatic vessels, alterations in, 821
 - pump failure, 821
 - physical assessment, 822
 - palpation of pulses, 822
 - skin inspection, 822
 - systemic and pulmonary circulation, 818, 818f
 - Vasectomy, 1774–1775
 - complications of, 1774
 - nursing management, 1775
 - procedure, 1774–175
 - Vasoactive drugs, 1377
 - Vasodilators, 803, 809
 - Vasopressin, 1377
 - side effects of, 1377
 - for variceal bleeding, 1377
 - Vasospasm, 737, 842
 - Vasovasostomy, 1775
 - Vector-borne diseases, 2176
 - Vecuronium, 426t
 - Veins, 819, 845
 - deep, 845t, 846
 - superficial, 845
 - Velcro straps, 854
 - Venlafaxine, 181, 217
 - Venography, 826
 - Venous blood gas (VBG) studies, 487
 - Venous disorders, 844
 - leg ulcers, 854–858
 - varicose veins, 858–860
 - venous insufficiency/postthrombotic syndrome, 853
 - venous thromboembolism, 845
 - Venous gangrene, 846
 - Venous insufficiency, 853–854
 - Venous prominence, breast, 1711c
 - Venous thromboembolism (VTE), 296, 455, 1178
 - assessment and diagnostic findings, 846–847
 - deep vein thrombosis, 846
 - endovascular management, 847
 - nursing management, 847
 - pathophysiology, 850
 - prevention of, 847
 - pulmonary embolism, 851
 - Ventilation
 - description of, 463
 - neurologic control of, 470
 - perfusion balance and, 467
 - Ventilation-perfusion ratio (\dot{V}/\dot{Q}), 468c
 - dead space, 468c
 - shunts, 468c
 - silent units, 468c
 - Ventilator, 559. *See also* Mechanical ventilation
 - adjustment, 562
 - monitoring, 563
 - settings, 563c
 - Ventilator-associated pneumonia (VAP), 533
 - Ventricular assist device (VAD), 780
 - Ventricular asystole, 708
 - Ventricular arrhythmias, 705–708
 - idioventricular rhythm, 707–708
 - premature ventricular complex, 705–706
 - ventricular asystole, 708
 - ventricular fibrillation, 707
 - ventricular tachycardia, 706–707
 - Ventricular escape rhythm, 707
 - Ventricular fibrillation, 262
 - Ventricular gallop, 796
 - Ventricular tachycardia, 707f
 - Ventriculography, 682
 - Venturi mask, 613
 - Venules, 819
 - Verbal descriptor scale (VDS), 204
 - Vertebral column, 1971
 - Vertigo, 1942
 - Vesicants, 2235
 - clinical manifestations of, 2235–2236
 - definition of, 320, 2235
 - description of, 2235
 - treatment of, 2236
 - Vesicle, 1807t
 - Vesicoureteral reflux, 1537
 - Vestibular nerve sectioning, 1954
 - Vestibular schwannomas. *See* Acoustic neuromas
 - Vestibulitis, 1691
 - Vestibulodynia, 1691
 - Veterinary Medical Assistance Teams (VMAT), 2220t
 - Vibrant sound bridge, 1960
 - Vibrio cholerae*, 2166
 - Video-assisted surgery, 632
 - Video-assisted thoracoscopy (VATS), 492
 - Vildagliptin, 1505t
 - Villi, 1212
 - Vinblastine, 321t
 - Vincristine
 - neurotoxicity of, 324
 - vesicant action, 320
 - Vinorelbine, 321t
 - Viral hepatitis, 1384–1391
 - hepatitis A virus (HAV), 1385–1387
 - hepatitis B virus (HBV), 1387–1390
 - hepatitis C virus (HCV), 1390–1391
 - hepatitis D virus (HDV), 1391
 - hepatitis E virus (HEV), 1391
 - hepatitis G virus (HGV), 1391
 - Viral load tests, 1015–1016
 - Viral replication, 2093
 - Viral rhinitis, 497–499
 - Viral set point, 1013
 - Virchow triad, 1352
 - Virtual colonoscopy, 1219, 1222
 - Visceral pain, 199t
 - Viscosupplementation, 1124
 - Visicol, 1223
 - Vision
 - age-related changes, 1902, 1905t
 - impairment, 1903
 - low vision aids, 1905t
 - Visual Analog Scale (VAS), 446
 - Vital capacity, 485
 - Vitamin A
 - deficiency, 1384
 - wound healing and, 404t
 - Vitamin B₁₂, 917
 - deficiency, 917
 - Vitamin B, wound healing and, 404t
 - Vitamin C deficiency, 1384
 - Vitamin D, 1098, 1802
 - Vitamin K, 1366
 - deficiency, 1384
 - wound healing and, 404t
 - Vitiligo, 1804
 - Vitreectomy, 1521
 - Vitreous humor, 1898
 - Vocal cords, 464
 - Voice sounds, 482
 - Voiding
 - changes in, 1542, 1543t
 - cystourethrography, 1551
 - diary, 1613
 - management of, 454–455
 - Volkman contracture, 1180
 - Vomiting, 1213
 - Von Recklinghausen disease, 1852
 - Von Willebrand disease (vWD), 938–939, 938f
 - types of, 938
 - Von Willebrand factor, 938
 - VTE. *See* Venous thromboembolism
 - Vulnerable plaque, 726
 - Vulvar cancer, 1698–1700
 - clinical manifestations, 1698
 - HPV infection and, 1698
 - medical management, 1698
 - nursing management, 1698–1700
 - anxiety relief, 1698
 - complications management, 1699
 - health history, 1698
 - pain relief, 1698–1699
 - patient education, 1699
 - postoperative care, 1698–1699
 - preoperative care, 1698
 - sexual function, 1698
 - skin integrity, 1699
 - skin preparation, 1698
 - risk factors, 1698
 - vulvar carcinoma in situ, 1698
 - Vulvar cysts, 1691–1692
 - Vulvar dystrophy, 1652, 1691–1692
 - Vulvar self-examination, 1680, 1698
 - Vulvectomy, 1698
 - Vulvitis, 1691
 - Vulvodynia, 1691
 - Vulvovaginal candidiasis. *See* Candidiasis
 - Vulvovaginal infections, 1677–1686, 1677c
 - bacterial vaginosis, 1678–1679
 - candidiasis, 1677–1678
 - nursing process, 1679–1681
 - anxiety reduction, 1680
 - assessment, 1679–1680
 - diagnosis, 1680
 - evaluation, 1681
 - nursing interventions, 1680–1681
 - patient education, 1680
 - planning and goals, 1680
 - risk factors, 1677c
 - trichomoniasis, 1679
- W**
- Wiskott–Aldrich syndrome (WAS), 1006t
 - Wolff–Parkinson–White (WPW) syndrome, 703
 - World Health Organization (WHO), 970
 - World Trade Center towers, destruction of, 2230
 - Wound-ostomy-continance (WOC) nurse, 1354
- X**
- Xanthine oxidase inhibitors, 1090
 - Xenografts, 1883
 - Xerosis, 1816
 - Xerostomia, 517
 - X-linked inheritance, 123
 - definition of, 123
- Y**
- Yankauer suction, 1240
- Z**
- Zafirlukast, 502, 637t
 - Zenker diverticulum, 1255
 - Zidovudine, 1933
 - Zika virus, 2173
 - Zileuton, 497, 637
 - Zoledronic acid, 977
 - Zollinger–Ellison syndrome (ZES), 1443

