

## A

- Abulia, definition, 43
- Achilles tendon injury,
  - etiology, 281
  - history taking, 281
  - imaging and diagnostic testing, 282
  - physical examination, 282
  - treatment, 282
- Acid maltase deficiency, features and neuromuscular rehabilitation, 210
- Acute inflammatory demyelinating polyneuropathy (AIDP), features and neuromuscular rehabilitation, 203
- Adhesive capsulitis,
  - history taking, 259
  - imaging and diagnostic testing, 259
  - pathophysiology, 259
  - physical examination, 259
  - treatment, 259, 260
- Aerobic capacity, cardiac rehabilitation, 125
- Aerobic training, cardiac rehabilitation and effects, 126–129
- Agitation, traumatic brain injury, 27
- Agnosia, definition, 43
- AIDP, *see* Acute inflammatory demyelinating polyneuropathy
- AIN syndrome, *see* Anterior interosseous nerve syndrome
- Alcohol-related neuropathy, features and neuromuscular rehabilitation, 205
- ALS, *see* Amyotrophic lateral sclerosis
- Amantadine, traumatic brain injury management, 20
- Amputation, *see also* Prosthetics,
  - frequency and distribution, 101
  - lower limb length and energy costs for
    - prosthetics, 101, 102
    - rehabilitation program, 102
- Amyotrophic lateral sclerosis (ALS),
  - electrodiagnostic studies, 331
  - features and neuromuscular rehabilitation, 199, 200, 330
- Anemia, cancer patients, 226
- Ankle fracture,
  - classification, 240, 241
  - clinical examination, 241
  - diagnostic evaluation, 241
  - treatment and rehabilitation, 241
- Ankle sprain,
  - classification, 280
  - history taking, 280
  - imaging and diagnostic testing, 280, 281
  - physical examination, 280
  - treatment, 281
- Anosognosia, definition, 43
- Anterior cruciate ligament, *see* Knee ligament/meniscus injury
- Anterior horn cell, disorders, 191, 192
- Anterior hypopituitarism, traumatic brain injury complication, 25

- Anterior interosseous nerve  
 (AIN) syndrome,  
 clinical findings, 303, 304  
 electrodiagnostic studies, 304  
 pathophysiology, 303
- Anticonvulsants, traumatic  
 brain injury patient  
 precautions, 20
- Aphasia, definition, 43
- Apraxia, definition, 43
- Arrhythmia, cardiac  
 rehabilitation, 140
- Asomatognosia, definition, 44
- Astereognosis, definition, 44
- Autonomic dysreflexia, spinal  
 cord injury patients, 71–73
- B**
- Baclofen,  
 pediatric spasticity  
 management, 182, 183  
 traumatic brain injury  
 management, 22, 23
- Becker's muscular dystrophy,  
 features and neuromuscular  
 rehabilitation, 208
- Benzodiazepines, traumatic  
 brain injury patient  
 precautions, 19, 20
- Bladder, spinal cord injury  
 patient function and  
 management, 76–79
- Botulinum toxin, traumatic  
 brain injury  
 management, 22
- Botulism, features and neuro-  
 muscular rehabilitation,  
 207, 208
- Brachial plexopathy,  
 anatomy, 320, 321  
 clinical findings, 321, 322  
 electrodiagnostic studies,  
 322–324  
 etiology, 319
- Brachial plexus injury, pediatric  
 rehabilitation, 189, 190
- Bradycardia, spinal cord  
 injury patients, 70
- Bromocriptine, traumatic brain  
 injury management,  
 20, 21
- C**
- CABG, *see* Coronary artery  
 bypass graft
- CAD, *see* Coronary artery  
 disease
- Cancer,  
 complications,  
 anemia, 226  
 bone metastasis, 228, 229  
 deep vein thrombosis,  
 227, 228  
 lymphedema, 230, 231  
 neutropenia, 227  
 pulmonary embolism,  
 227, 228  
 spinal cord compression,  
 229, 230  
 thrombocytopenia,  
 226, 227  
 diagnostic evaluation, 221  
 differential diagnosis,  
 debility, 222, 223  
 deformity, 223  
 pain, 221, 222  
 weakness, 222  
 epidemiology, 217, 218  
 follow-up, 225, 226  
 history taking, 218–220  
 pathogenesis, 218  
 physical examination,  
 220, 221  
 risk factors, 218  
 treatment, 223–225

- Cardiac rehabilitation,
  - overview, 120, 121
  - post-myocardial infarction,
    - acute phase, 132, 133
    - convalescent phase, 133
    - maintenance phase, 135
    - risk factor modification, 121–123
    - training phase, 133, 134
    - Wenger protocol, 130, 132
  - angina pectoris patients, 136
  - post-coronary artery
    - bypass graft, 136, 137
  - percutaneous transluminal coronary angioplasty patients, 137
  - heart transplant patients, 138, 139
  - valvular heart disease patients, 139
  - cardiomyopathy patients, 139, 140
  - arrhythmia patients, 140
  - high-risk patients, 135
  - primary versus secondary prevention, 130
  - cardiac anatomy and physiology, 123–125, 129–131
  - aerobic capacity, 125
  - heart rate, 125
  - stroke volume, 125, 126
  - cardiac output, 126
  - myocardial oxygen consumption, 126
  - aerobic training and effects, 126–129
- Carpal tunnel syndrome,
  - clinical findings, 304
  - electrodiagnostic studies, 305, 306
  - history taking, 264
  - imaging and diagnostic testing, 264, 265
  - pathophysiology, 264, 304
  - physical examination, 264
  - treatment, 265
- Cerebral palsy (CP),
  - classification, 179, 180
  - clinical manifestations and rehabilitation, 180, 181
  - diagnosis, 179, 180
  - epidemiology, 179
- Cerebral salt wasting (CSW),
  - traumatic brain injury complication, 25
- Cervical radiculopathy,
  - anatomy, 314
  - clinical findings, 314, 315
  - electrodiagnostic studies, 315–319
  - etiology, 252, 313, 314
  - history taking, 252, 253
  - imaging and diagnostic testing, 255
  - physical examination, 254
  - treatment, 255
- Charcot-Marie-Tooth disease (CMT), features and neuromuscular rehabilitation, 201–203
- CHF, *see* Congestive heart failure
- Chronic inflammatory demyelinating polyneuropathy (CIDP), features and neuromuscular rehabilitation, 204
- Chronic obstructive pulmonary disease (COPD),
  - epidemiology, 147
  - etiology, 148
  - morbidity, 147, 148
  - pulmonary rehabilitation, *see* Pulmonary rehabilitation
- CIDP, *see* Chronic inflammatory demyelinating polyneuropathy
- CIMT, *see* Constraint-induced movement therapy

- Clonidine, traumatic brain injury patient precautions, 20
- CMAP, *see* Compound muscle action potential
- CMT, *see* Charcot-Marie-Tooth disease
- Communication disorders, traumatic brain injury, 13, 14
- Compound muscle action potential (CMAP), measurement, 289–292 motor studies, 293–295
- Computed tomography (CT), stroke, 46
- Congestive heart failure (CHF), epidemiology, 119 rehabilitation, *see* Cardiac rehabilitation
- Constraint-induced movement therapy (CIMT), traumatic brain injury assessment, 17
- Contractures, stroke complication, 54
- COPD, *see* Chronic obstructive pulmonary disease
- Coronary artery bypass graft (CABG), cardiac rehabilitation, 136, 137
- Coronary artery disease (CAD), epidemiology, 119 infarct distribution, 124 rehabilitation, *see* Cardiac rehabilitation risk factors and modification, 121–123
- CP, *see* Cerebral palsy
- Cranial nerves, injury and assessment, 13, 15
- CSW, *see* Cerebral salt wasting
- CT, *see* Computed tomography
- Cubital tunnel syndrome, history taking, 263 imaging and diagnostic testing, 263 pathophysiology, 262, 263 physical examination, 263 treatment, 263
- D**
- Dantrolene sodium, pediatric spasticity management, 182
- DDH, *see* Developmental dysplasia of the hip
- De Quervain tenosynovitis, history taking, 265 imaging and diagnostic testing, 265 pathophysiology, 265 physical examination, 265 treatment, 266
- Deep venous thrombosis (DVT), cancer patients, 227, 228 spinal cord injury, 68 stroke complication, 54
- Dejerine-Roussy syndrome, definition, 44
- Depression, SAD PERSONS mnemonic for suicide risks, 86, 87 SIG E CAPS mnemonic, 86 spinal cord injury patients, 85, 86 stroke complication, 55 traumatic brain injury, 26, 27
- Dermatomyositis (DM), features and neuromuscular rehabilitation, 210
- Developmental dysplasia of the hip (DDH), pediatric rehabilitation, 187
- DI, *see* Diabetes insipidus

- Diabetes insipidus (DI),  
traumatic brain injury  
complication, 24, 25
- Diabetes mellitus,  
polyneuropathy features and  
neuromuscular  
rehabilitation, 204  
risk factor modification in  
cardiac patients, 122  
spinal cord injury  
patients, 82
- Diazepam, pediatric spasticity  
management, 182
- DM, *see* Dermatomyositis
- Donepezil, traumatic brain  
injury management, 21
- Duchenne's muscular dystro-  
phy, features and  
neuromuscular rehabilita-  
tion, 208
- DVT, *see* Deep venous  
thrombosis
- Dyspraxia, definition, 44
- E**
- Electromyography (EMG), *see*  
*also specific diseases,*  
equipment, 295, 296  
indications, 285, 295  
motor unit morphology, 298  
waveforms, 296–298
- Emesis, spinal cord injury  
patients, 74, 75
- EMG, *see* Electromyography
- Epicondylitis, *see* Lateral  
epicondylitis
- F**
- Facioscapulohumeral  
dystrophy, features and  
neuromuscular  
rehabilitation, 209
- Femoral shaft fracture, features  
and rehabilitation, 242
- Foot fractures, features and  
rehabilitation, 242
- Forearm fractures, features and  
rehabilitation, 246, 247
- G**
- Gallstones, spinal cord injury  
patients, 74
- Galveston Orientation Amnesia  
Test (GOAT), traumatic  
brain injury assessment,  
5, 13
- Gastroesophageal reflux  
disease (GERD), spinal  
cord injury patients, 74
- GCS, *see* Glasgow Coma Scale
- GERD, *see* Gastroesophageal  
reflux disease
- Gerstmann's syndrome,  
definition, 44
- Glasgow Coma Scale (GCS),  
traumatic brain injury  
assessment, 4, 5
- GOAT, *see* Galveston Orienta-  
tion Amnesia Test
- H**
- Hamstring strain,  
history taking, 274  
imaging and diagnostic  
testing, 274  
pathophysiology, 273, 274  
physical examination, 274  
treatment, 274, 275
- Heart rate, overview, 125
- Heart transplant, cardiac  
rehabilitation, 138, 139
- Hereditary neuropathy with  
predisposition to pressure  
palsy, features and  
neuromuscular  
rehabilitation, 203

Heterotopic ossification (HO),  
spinal cord injury patients,  
81, 82

traumatic brain injury, 27, 28

Hip fracture,  
classification, 234, 235  
clinical examination, 234  
complications, 236  
diagnostic evaluation, 234  
epidemiology, 233  
history taking, 234  
rehabilitation, 235, 236  
risk factors, 233  
treatment, 234, 235

Hip osteoarthritis,  
history taking, 272  
imaging and diagnostic  
testing, 273  
pathophysiology, 272  
physical examination, 273  
treatment, 273

Hip replacement, *see* Total hip  
replacement

HO, *see* Heterotopic ossification  
Human immunodeficiency virus  
neuropathy,  
features and neuromuscular  
rehabilitation, 205

Humerus fracture, *see* Humerus  
shaft fracture; Proximal  
humerus fracture

Humerus shaft fracture,  
features and  
rehabilitation, 246

Hydrocephalus, traumatic brain  
injury, 28

Hypercholesterolemia, risk factor  
modification in cardiac  
patients, 122

Hypertension, risk factor modi-  
fication in cardiac  
patients, 122

Hypertonia, *see* Spasticity

## I

Ideational apraxia, definition, 44

Ideomotor apraxia, definition, 44

ILD, *see* Interstitial lung disease

Impersistence, definition, 44

Interdigital neuroma,  
etiology, 283  
history taking, 283  
imaging and diagnostic  
testing, 283  
physical examination, 283  
treatment, 284

Interstitial lung disease (ILD),  
*see* Pulmonary  
rehabilitation

## J

JRA, *see* Juvenile rheumatoid  
arthritis

Juvenile rheumatoid arthritis  
(JRA), pediatric  
rehabilitation, 188

## K

Knee fracture, features and  
rehabilitation, 242

Knee ligament/meniscus injury,  
history taking, 276

imaging and diagnostic  
testing, 277

pathophysiology, 275, 276  
physical examination,  
276, 277

treatment, 277

Knee osteoarthritis,  
history taking, 277, 278

imaging and diagnostic  
testing, 278

physical examination, 278

risk factors, 277

treatment, 278

Knee replacement, *see* Total knee  
replacement

## L

Lambert-Eaton myasthenic syndrome (LEMS), features and neuromuscular rehabilitation, 207

Lateral epicondylitis, etiology, 261, 262  
 history taking, 262  
 imaging and diagnostic testing, 262  
 physical examination, 262  
 treatment, 262

Legg-Calve-Perthes disease, pediatric rehabilitation, 188

LEMS, *see* Lambert-Eaton myasthenic syndrome

Level of consciousness (LOC), assessment, 10–12

Ligament of Struther's syndrome, clinical findings, 302, 303  
 electrodiagnostic studies, 303  
 prevalence, 302

Limb-girdle muscular dystrophy, features and neuromuscular rehabilitation, 209

LOC, *see* Level of consciousness

Low back pain, chronic, 266  
 epidemiology, 266  
 history taking, 266, 267  
 imaging and diagnostic testing, 267, 268  
 physical examination, 267  
 treatment, 268, 269

Lumbosacral radiculopathy, anatomy, 314  
 clinical findings, 314, 315  
 electrodiagnostic studies, 315–319

etiology, 314  
 history taking, 269, 270  
 imaging and diagnostic testing, 270, 271  
 pathophysiology, 269  
 physical examination, 270  
 treatment, 271

Lymphedema, cancer patients, 230, 231

## M

Magnetic resonance imaging (MRI), stroke, 46

McArdle's disease, features and neuromuscular rehabilitation, 210

Medial collateral ligament, *see* Knee ligament/meniscus injury

Mechanical ventilation, *see* Ventilation

Median mononeuropathy, anatomy, 302  
 pathophysiology, 301, 302

Methyl-dopa, traumatic brain injury patient precautions, 20

Methylphenidate, traumatic brain injury management, 21

MG, *see* Myasthenia gravis  
 Minimally conscious state, traumatic brain injury, 29

Modafinil, traumatic brain injury management, 21

Modified Ashworth Scale, traumatic brain injury assessment, 7

Morton neuroma, *see* Interdigital neuroma

Motor aphasia, definition, 44

Motor unit, anatomy, 191, 192

Motor unit action potential (MUAP), measurement, 298

- MRI, *see* Magnetic resonance imaging
- MUAP, *see* Motor unit action potential
- Myasthenia gravis (MG), features and neuromuscular rehabilitation, 206, 207
- Myocardial infarction, *see* Cardiac rehabilitation
- Myocardial oxygen consumption, overview, 126
- Myopathy,
  - clinical findings, 328, 329
  - electrodiagnostic studies, 329, 330
  - etiology, 328
  - inherited versus acquired, 194
- Myotonia, disorders, 194
- Myotonic dystrophy, features and neuromuscular rehabilitation, 209, 210
- N**
- NDT, *see* Neurodevelopmental therapy
- Neck pain,
  - epidemiology, 249, 250
  - history taking, 250
  - imaging and diagnostic testing, 251
  - physical examination, 250, 251
  - treatment, 251, 252
- Nerve block, pediatric spasticity management, 182
- Nerve conduction studies, *see also specific diseases*,
  - conduction velocity, 292
  - equipment, 289–291
  - indications, 285
  - motor studies, 293–295
  - sensory studies, 295
  - technique, 291, 292
- Neurodevelopmental therapy (NDT), pediatric rehabilitation, 177
- Neurogenic bowel, spinal cord injury patients, 75, 76
- Neuroleptics, traumatic brain injury patient
  - precautions, 19
- Neuromuscular junction, disorders, 193
- Neuromuscular rehabilitation,
  - acid maltase deficiency, 210
  - acute inflammatory demyelinating polyneuropathy, 203
  - alcohol-related neuropathy, 205
  - amyotrophic lateral sclerosis, 199, 200
  - approach, 199
  - Becker's muscular dystrophy, 208
  - botulism, 207, 208
  - Charcot-Marie-Tooth disease, 201–203
  - chronic inflammatory demyelinating polyneuropathy, 204
  - congenital myopathy, 211
  - dermatomyositis, 210
  - diabetic polyneuropathy, 204
  - diagnostic testing, 198
  - Duchenne's muscular dystrophy, 208
  - facioscapulohumeral dystrophy, 209
  - goals, 211
  - hereditary neuropathy with predisposition to pressure palsy, 203
  - history taking,
    - family history, 196



social and functional  
     history, 196  
 subjective symptoms,  
     195, 196  
 human immunodeficiency  
     virus neuropathy, 205  
 Lambert-Eaton myasthenic  
     syndrome, 207  
 limb-girdle muscular  
     dystrophy, 209  
 McArdle's disease, 210  
 myasthenia gravis, 206, 207  
 myotonic dystrophy,  
     209, 210  
 orthopedic surgery, 213, 214  
 physical examination,  
     196–198  
 polymyositis, 210  
 post-polio syndrome, 201  
 spinal muscular atrophy,  
     200, 201  
 tools,  
     activities of daily living  
         assistive devices, 213  
     bracing, 212  
     exercise, 211, 212  
     neuropathic pain  
         interventions, 214  
     pulmonary rehabilita-  
         tion, 214  
     seated mobility, 213  
     speech therapy, 214  
     standing and mobility  
         aids, 212  
     toxic neuropathy, 205  
 Neuron, anatomy and  
     physiology, 285–289  
 Neuropathic pain,  
     interventions for neuromus-  
         cular disease, 214  
     spinal cord injury patients,  
         84, 85  
 Neutropenia, cancer  
     patients, 227

## O

Obesity, risk factor modification in  
     cardiac patients, 123  
 Orthostatic hypotension, spinal  
     cord injury patients, 70, 71  
 Orthotics,  
     definitions, 118  
     lower extremity,  
         ankle-foot orthosis,  
             108, 109  
         foot orthosis, 107  
         hip-knee-ankle-foot  
             orthosis, 110  
         knee-ankle-foot orthosis,  
             109, 110  
         orthopedic shoes, 107  
         patellar tendon-bearing  
             orthosis, 109  
         supramalleolar  
             orthosis, 108  
     University of California  
         Biomechanics Labo-  
         ratory Orthosis, 107  
     pediatric rehabilitation, 179  
     upper extremity,  
         elbow orthosis, 117  
         finger orthosis, 116  
         hand-finger orthosis,  
             116, 117  
         shoulder orthosis, 118  
         wrist-hand-finger  
             orthosis, 117  
 Osgood-Schlatter disease,  
     history taking, 275  
     imaging and diagnostic  
         testing, 275  
     pathophysiology, 275  
     pediatric rehabilitation,  
         187, 188  
     physical examination, 275  
     treatment, 275  
 Osteoarthritis, *see* Hip  
     osteoarthritis; Knee  
     osteoarthritis  
 Osteoporosis, spinal cord injury  
     patients, 82

## P

- Patellofemoral disorder,  
 history taking, 279  
 imaging and diagnostic  
 testing, 279  
 pathophysiology, 278  
 physical examination, 279  
 treatment, 279
- Pediatric rehabilitation,  
 brachial plexus injury,  
 189, 190  
 cerebral palsy, 179–181  
 developmental milestones,  
 175, 176  
 juvenile rheumatoid  
 arthritis, 188  
 limb deficiency, 186, 187  
 neurodevelopmental  
 therapy, 177  
 orthopedic disorders, 187, 188  
 orthoses, 179  
 outcome measures and  
 instruments, 175, 177, 178  
 spasticity, 181–183  
 spina bifida, 183, 184  
 spinal cord injury, 184  
 systemic lupus erythematosus,  
 188, 189  
 traumatic brain injury,  
 184, 185
- Pelvic fracture, features and  
 rehabilitation, 241, 242
- Peptic ulcer, spinal cord  
 injury patients, 73, 74
- Percutaneous transluminal  
 coronary angioplasty  
 (PTCA), cardiac  
 rehabilitation, 137
- Peripheral nerve injury,  
 electrodiagnostic  
 studies, 298–301
- Peripheral neuropathy,  
 anatomy, 325  
 clinical findings, 325  
 electrodiagnostic studies,  
 325–328  
 overview, 193, 322
- Peroneal neuropathy,  
 anatomy, 312  
 clinical findings, 312  
 electrodiagnostic studies,  
 312, 313  
 pathophysiology, 311
- Plantar fasciitis,  
 etiology, 282  
 history taking, 282  
 imaging and diagnostic  
 testing, 283  
 physical examination, 283  
 treatment, 283
- PM, *see* Polymyositis
- Pneumonia, stroke  
 complication, 53, 54
- Polio, *see* Post-polio syndrome
- Polymyositis (PM), features  
 and neuromuscular  
 rehabilitation, 210
- Post-polio syndrome, features  
 and neuromuscular  
 rehabilitation, 201
- Prazosin, traumatic brain injury  
 patient precautions, 20
- Pressure sores,  
 staging in spinal cord  
 injury, 66, 67  
 stroke complication, 54
- Prosopagnosia, definition, 44
- Prosthetics, *see also* Amputation,  
 definitions, 118  
 limb length and energy costs,  
 101, 102  
 lower extremity prosthetic  
 design by level of  
 amputation,  
 hip disarticulation, 106  
 knee disarticulation, 105

- modified Syme's, 103
  - partial foot, 103
  - transfemoral, 105, 106
  - transtibial, 103, 104
- pediatric rehabilitation, 186, 187
- upper extremity prosthetic
  - design by level of amputation,
    - digit, 110, 111
    - elbow disarticulation, 113, 114
    - forequarter, 115
    - Mitt amputation, 111
    - partial hand, 112
    - shoulder disarticulation, 115
    - specialty terminal devices, 116
    - transhumeral, 114, 115
    - transradial, 113
    - wrist disarticulation, 112
- Proximal humerus fracture,
  - classification, 244
  - clinical examination, 244
  - diagnostic evaluation, 244
  - treatment and rehabilitation, 245
- PT syndrome,
  - clinical findings, 303
  - electrodiagnostic studies, 303
  - pathophysiology, 303
- PTCA, *see* Percutaneous transluminal coronary angioplasty
- Pulmonary embolism,
  - cancer patients, 227, 228
  - spinal cord injury, 68
  - stroke complication, 54
- Pulmonary hypertension, *see* Pulmonary rehabilitation
- Pulmonary rehabilitation,
  - benefits,
    - dyspnea improvement, 150, 151
    - exercise capacity, 149
    - quality of life, 150, 151
  - definition, 148
  - education,
    - disease-specific education, 156
    - energy conservation, 152
    - medications, 152, 154
    - nutritional counseling, 155, 156
    - oxygen therapy, 155
    - pulmonary toilet, 157
    - stress management, 156, 157
  - goals, 153, 154
  - maintenance, 162
  - neuromuscular disease, 214
  - perioperative rehabilitation, 160, 161
  - postoperative rehabilitation, 161
  - program design,
    - components, 160
    - exercise prescription, 159, 160
    - exercise testing, 159
    - materials, 158
    - patient screening, 158, 159
    - support groups, 158
    - team, 157, 158
  - research limitations, 149
  - smoking cessation, 150, 152
  - ventilation,
    - criteria for long-term mechanical ventilation, 163, 164
    - discharge criteria, 170
    - evaluation of need, 163, 166
    - noninvasive ventilatory support, 166–169
    - outcomes, 166
    - settings for management, 166
    - support, 162, 163, 165

**R**

- Radial mononeuropathy,
  - anatomy, 310
  - clinical findings, 310, 311
  - electrodiagnostic studies, 311
  - pathophysiology, 309, 310
- Rancho Los Amigos Scale of Cognitive Functioning, traumatic brain injury assessment, 5, 6
- Rhizotomy, pediatric spasticity management, 182
- Rotator cuff tear,
  - history taking, 257, 258
  - imaging and diagnostic testing, 258
  - pathophysiology, 257
  - physical examination, 258
  - treatment, 258, 259

**S**

- Scaphoid fracture,
  - clinical examination, 245
  - diagnostic evaluation, 245
  - features, 245
  - treatment and rehabilitation, 246
- SCI, *see* Spinal cord injury
- Seizure, traumatic brain injury, 28, 29
- Sensory aphasia, definition, 45
- Sensory nerve action potential (SNAP), measurement, 289, 290, 292, 295
- Sexual function, spinal cord injury patients, 80, 81
- Shoulder impingement syndrome,
  - etiology, 255
  - history taking, 255, 256
  - imaging and diagnostic testing, 256, 257
  - physical examination, 256
  - treatment, 257
- Shoulder instability,
  - clinical examination, 243, 260, 261
  - diagnostic evaluation, 243, 261
  - etiology, 242, 243, 260
  - history taking, 260
  - treatment and rehabilitation, 243, 244, 261
- Shoulder pain, stroke complication, 54
- SIADH, *see* Syndrome of inappropriate antidiuretic hormone
- SLE, *see* Systemic lupus erythematosus
- SMA, *see* Spinal muscular atrophy
- Smoking,
  - cessation, 150, 152
  - lung diseases, 148
  - risk factor modification in cardiac patients, 123
- SNAP, *see* Sensory nerve action potential
- Spasticity,
  - patterns of spastic hypertonia, 16
  - pediatric rehabilitation, 181–183
  - spinal cord injury patients, 83, 84
  - traumatic brain injury,
    - assessment, 15, 16
    - spastic hypertonia management, 17, 18, 21–23
- Speech therapy, neuromuscular disease, 214
- Spina bifida, pediatric rehabilitation, 183, 184
- Spinal cord compression, cancer patients, 229, 230

- Spinal cord injury (SCI),  
  American Spinal Injury  
    Association classification  
    and evaluation, 60–65  
  epidemiology, 59, 60  
  life expectancy, 60  
  pediatric rehabilitation, 184  
  rehabilitation,  
    community  
      reintegration, 94, 95  
    needs, 87, 88  
    physical and occupational  
      therapy prescription,  
      89, 92, 93  
    projected functional  
      outcomes, 89–91,  
      93, 94  
    team, 87, 89  
  research prospects, 94, 95  
  treatment,  
    acute medical management,  
      64, 65  
    postacute medical  
      management,  
      autonomic dysreflexia,  
      71–73  
      bladder function and  
      management,  
      76–79  
      bradycardia, 70  
      emesis, 74, 75  
      endocrine disorders,  
      81, 82  
      gallstones, 74  
      gastroesophageal reflux  
      disease, 74  
      integumentary system,  
      66, 67  
      neurogenic bowel,  
      75, 76  
      neuropathic pain,  
      84, 85  
      orthostatic hypotension,  
      70, 71  
    peptic ulcer, 73, 74  
    psychological issues,  
      85, 86  
    pulmonary system,  
      68, 69  
    sexual function and  
      fertility, 80, 81  
    spasticity, 83, 84  
    thromboembolic  
      disease, 68
- Spinal muscular atrophy  
(SMA),  
  electrodiagnostic studies, 331  
  features and neuromuscular  
    rehabilitation, 200,  
    201, 330
- Stroke,  
  angiography, 46  
  clinical examination, 45  
  complications,  
    contractures, 54  
    deep venous  
      thrombosis, 54  
    depression, 55  
    neurological complications,  
      54, 55  
    pneumonia, 53, 54  
    pressure sores, 54  
    pulmonary embolism, 54  
    shoulder pain, 54  
  differential diagnosis, 47  
  epidemiology and  
    outcomes, 33  
  etiology,  
    hemorrhagic stroke, 35  
    ischemic stroke, 34, 35  
  history taking,  
    definitions, 43–45  
    intracerebral  
      hemorrhage, 43  
    ischemic stroke, 38, 43  
    subarachnoid  
      hemorrhage, 43

- imaging and laboratory evaluation, 46, 47
  - pathogenesis,
    - cerebral amyloid angiopathy, 36
    - hypertensive intracerebral hemorrhage, 36
    - ischemic stroke, 35, 36
    - sacular aneurysm, 36
  - rehabilitation,
    - assessments and interventions, 52, 53
    - goals, 51
    - initiation, 51
    - settings, 51, 52
  - risk factors, 36–38
  - syndromes, 39–42
  - treatment,
    - intracerebral hemorrhage, 50
    - ischemic stroke, 47–50
    - subarachnoid hemorrhage, 50
  - Stroke volume, overview, 125, 126
  - Suicide, SAD PERSONS mnemonic risk assessment, 86, 87
  - Syndrome of inappropriate antidiuretic hormone (SIADH), traumatic brain injury complication, 24, 25
  - Systemic lupus erythematosus (SLE), pediatric rehabilitation, 188, 189
- T**
- TBI, *see* Traumatic brain injury
  - Tennis elbow, *see* Lateral epicondylitis
  - THR, *see* Total hip replacement
  - Thrombocytopenia, cancer patients, 226, 227
  - Tizanidine, pediatric spasticity management, 182
  - TKR, *see* Total knee replacement
  - Total hip replacement (THR),
    - complications, 238
    - frequency, 236
    - indications, 236
    - prosthetic design, 236, 237
    - rehabilitation, 237, 238
  - Total knee replacement (TKR),
    - complications, 240
    - frequency, 238, 239
    - indications, 239
    - prosthetic design, 239
    - rehabilitation, 239, 240
  - Toxic neuropathy, features and neuromuscular rehabilitation, 205
  - Transcortical aphasia, definition, 45
  - Traumatic brain injury (TBI),
    - assessment for rehabilitation, Glasgow Coma Scale, 4, 5
    - loss of consciousness time, 5
    - medical history and record review, 7, 8
    - Modified Ashworth Scale, 7
    - posttraumatic amnesia and Galveston Orientation Amnesia Test, 5, 13
    - Rancho Los Amigos Scale of Cognitive Functioning, 5, 6
    - clinical spectrum, 1, 2
    - cognitive rehabilitation, 26

complications,  
   agitation, 27  
   cardiovascular, 23  
   depression, 26, 27  
   endocrine, 24  
   gastrointestinal/  
     genitourinary, 23, 24  
   heterotopic ossification,  
     27, 28  
   hydrocephalus, 28  
   miscellaneous, 25, 26  
   seizure, 28, 29  
 economic impact, 1  
 epidemiology, 2  
 mild injury, 29, 30  
 minimally conscious state, 29  
 pathophysiology, 2–4  
 pharmacotherapy,  
   adverse events, 19, 20  
   attention deficits, 21  
   contraindications, 19  
   hypoarousal, 20, 21  
   initiation deficits, 21  
   memory deficits, 21  
   principles, 18, 19  
   spastic hypertonia, 21–23  
 physical examination,  
   abdomen, 9  
   cardiopulmonary  
     system, 9  
   general appearance, 8  
   genitourinary system, 9  
   head and neck, 8, 9  
   musculoskeletal system,  
     9, 10  
   neurological examination,  
     10–17  
   skin, 8  
   vital signs, 8  
 physical interventions,  
   constraint-induced move-  
     ment therapy, 17

  spastic hypertonia  
     management, 17, 18  
   prognosis, 30, 31  
   vegetative state, 29  
 Traumatic brain injury, pediatric  
   rehabilitation, 184, 185

## U

Ulnar neuropathy,  
   anatomy, 307  
   clinical findings, 307, 308  
   electrodiagnostic studies,  
     308, 309  
   pathophysiology, 306, 307

## V

Valvular heart disease,  
   cardiac rehabilitation, 139  
 Vegetative state, traumatic brain  
   injury, 29  
 Ventilation,  
   pulmonary rehabilitation,  
     criteria for long-term  
       mechanical  
       ventilation, 163, 164  
   discharge criteria, 170  
   evaluation of need,  
     163, 166  
   noninvasive ventilatory  
     support, 166–169  
   outcomes, 166  
   settings for manage-  
     ment, 166  
   support, 162, 163, 165  
   stroke patients, 68, 69  
 Visual object agnosia,  
   definition, 45

## W

Wenger protocol, *see* Cardiac  
   rehabilitation  
 Wrist fractures, features and  
   rehabilitation, 247