Index

a
AARV. see American Association of Rehabilitation Veterinarians (AARV)
AASVB. see American Association of Specialty Veterinary Boards (AASVB)
AC. see alternating current (AC)
Academy of Physical Rehabilitation Veterinary Technicians 3, 24
active range of motion (ROM) 64–65
active stretches 89–90, 89f, 90f
active stretching 70, 72, 72f
activity restrictions
rehabilitation team in 336–338, 336f, 337f
in therapy prescription 51
acupuncture 377–389
aqua- 381
case examples 385b–388b, 385f–387b
for cats 383, 386b–388b, 386f–387f
clinical applications of
in equine rehabilitation 383
defined 378
described 378, 378f
electro- 37, 381, 382f
hemo- 382
laser 382–384
for neurological patients 180
pneumo- 382
research related to 384–385, 385b–388b, 385f–387b
safety of 383–384
stimulation methods with 381–383, 381f, 382f
veterinary rehabilitation technician’s role in 384
acupuncture points 380–381
on meridians 380–381
ACVS. see American College of Veterinary Surgeons (ACVS)
adjunct professionals
working with rehabilitation team in 343–346, 344b, 346f
adjunct rehabilitation team members
role of 13
aging process 188
physiologic changes during 188–191, 190b–193b, 191f
air mattress
exercises using 296, 296f
air splints
for assisted ambulation 152–153
alternating current (AC) 242, 243f
ambulation
assisted
devices for 147–152, 152f see also specific devices, e.g., ramp(s)
American Association of Rehabilitation Veterinarians (AARV) 3
American Association of Specialty Veterinary Boards (AASVB) 3
American College of Veterinary Sports Medicine and Rehabilitation 3
American College of Veterinary Surgeons (ACVS) 2
American Physical Therapy Association (APTA) 2
American Physiotherapy Association (APA) 2

Edited by Mary Ellen Goldberg and Julia E. Tomlinson.
© 2018 John Wiley & Sons, Inc. Published 2018 by John Wiley & Sons, Inc.
American Veterinary Medical Association (AVMA) 2
American Women's Physical Therapeutic Association 2
amplitude of intensity 243, 244f
animal handling skills
  in HEP client assessment 81
Animal Physical Therapist Special Interest Group (APT-SIG) 2
animal psychology
  understanding 128
Animal Rehabilitation Institute
  certified rehabilitation veterinary technician education from 5
anxiety
  behavioral issues in geriatric patients related to 194
  challenges related to patient with case example 139
  swimming-related 320b
APA. see American Physiotherapy Association (APA)
APTA. see American Physical Therapy Association (APTA)
APT-SIG. see Animal Physical Therapist Special Interest Group (APT-SIG)
aqua-acupuncture 381
aquatic rehabilitation business promoting 326–327
aquatic therapy 308–328. see also hydrotherapy
  in equine rehabilitation 363–368, 363f, 367b
  puppy water introduction classes 326
arthrokinematic motion 65
Assisi Loop
  in PEMF therapy protocol for 256–257, 256f
assisted ambulation
  devices for 147–152, 152f
  grip socks for 148
assisted standing
  devices for 147, 147f, 148f
  for neurological patients 301
  therapy ball for 147, 147f
assisted walking
  in HEP 91
assistive devices
  in canine rehabilitation 295
  for disabled patients 145–162 see also prosthetics, for assisted ambulation
    for assisted ambulation 147–152, 152f
    for assisted standing 147, 147f, 148f
  beds and bedding 151–152
  boots 148–149
  braces 153–155, 154f
  carts 150–151
  custom orthotics 155–156, 156f
  custom prosthetics 156–161
  harnesses 149–150
  historical background of 146
  hydraulic lifts 152, 153f
  indications for 146
  introduction 145–146
  premade orthoses 152–155, 154f
  ramps 150
  slings 149–150
  splints 152–153, 154f
  stairs 150
  types of 147–155, 147f, 148f, 153f, 154f
  wheelchairs 150–151
  in therapy prescription 51
athlete(s)
  hydrotherapy for 311–312
  rehabilitation for 15
attitude(s)
  in neurological patients
    nursing care for 175
AVMA. see American Veterinary Medical Association (AVMA)
avulsion(s)
  brachial plexus
    in cats 178
b
back pain
  lower
    disability related to 390
backward walking
  as hind limb exercise 298
balance beam 296
balance boards
  in canine rehabilitation 291–292, 292f
  exercises using 295
balance discs
  in canine rehabilitation 291–292, 292f
  exercises using 295
balance exercises
canine 295–297, 296f, 297f
ball(s)
in canine rehabilitation 289–290
therapy
for assisted standing 147, 147f
ball work
exercises using 297, 297f
band(s)
elastic resistance
in canine rehabilitation 292
bath(s)
contrast
in cryotherapy 223–224
paraffin
in thermotherapy 221
bed(s)
for assisted ambulation 151–152
PEMF 257
bedding
for assisted ambulation 151–152
beg
in core strengthening 297
behavior(s)
marking 134–135, 135f
pain and 30t–31t
reinforcing
in motivating patient 128–129, 129f
behavioral changes
pain management–related 103–104
behavioral issues
in geriatric patients 191, 193–195, 193b, 195t
bending
in STM 61
biceps stretch 71f
bladder emptying needs
maintaining
in home nursing care 211
blanket
PEMF 257
blocks
in canine rehabilitation 291
exercises using 296
body language
understanding 131, 132f, 133f
body mechanics
proper 206–207, 206f
bond(s)
client–patient
in HEP client assessment 81–82
human–animal
defined 95–96
bone healing
PEMF therapy in 254–255
shockwave therapy in 280–281, 281b
boots
for assisted ambulation 148–149
BOSU balls
in canine rehabilitation 289–290
planking on
in core strengthening 297–298
brace(s)
for assisted ambulation 153–155, 154f
brachial plexus avulsion
in cats 178
bracing
historical background of 146
buoyancy
in hydrotherapy 308–309
C
calcium
as factor in nutritional counseling 123–124
canine athlete/working dogs
hydrotherapy for 311–312
rehabilitation for 15
Canine Brief Pain Inventory (CBPI) 33, 34f
Canine Rehabilitation Institute
certified rehabilitation veterinary technician education from 5
carbohydrates
as factor in nutritional counseling 124
cart(s)
for assisted ambulation 150–151
cat(s)
acupuncture for 383, 386b–388b, 386f–387f
chiropractic medicine for 395–396, 396f
chronic pain scales for 32
cryotherapy for 228
exercises for 302–303
proprioceptive 302
geriatric 187–204 see also geriatric patients
mobility/cognitive dysfunction questionnaire 195t
neurological conditions 178
cat(s) (cont’d)

obese
  case example 141–142
pain in 43, 44f
passive neural exercises for 179–180
physical rehabilitation for
  pain related to 43, 44f
rehabilitation program for
  guidelines for 182–183
therapeutic exercises for 180, 181b
thermotherapy for 180, 228
WSAVA body condition score for 113f
WSAVA muscle condition score for 116f
cavaletti(s)
  as front limb exercise 301
cavaletti balls
  for neurological patients 303
cavaletti course
  exercises using 295
cavaletti poles
  in canine rehabilitation 290–291, 290f
cavaletti walking
  as hind limb exercise 299
cavitation
  therapeutic ultrasound and 263–264
types of 263
CBPI. see Canine Brief Pain Inventory (CBPI)
CCRA. see certified canine rehabilitation assistant (CCRA)
CCRP. see certified canine rehabilitation practitioner (CCRP)
CCRT. see certified canine rehabilitation therapist (CCRT)
CERA. see certified equine rehabilitation assistant (CERA)
ceramic agents
  in thermotherapy 221–222
CERP. see certified equine rehabilitation practitioner (CERP)
certified canine rehabilitation assistant
  (CCRA) 5
certified canine rehabilitation practitioner
  (CCRP) 5
certified canine rehabilitation therapist
  (CCRT) 5
certified equine rehabilitation assistant
  (CERA) 5
certified equine rehabilitation practitioner
  (CERP) 5
certified rehabilitation veterinary technicians
  education sources for 5–6
  practice regulations for 6
certified veterinary massage and rehabilitation therapist (CVMRT) 5
certified veterinary pain practitioner (CVPP) 24
cervical spondylomyelopathy
  in dogs 177–178
challenging patients
  case examples 138–142
  excitable dogs with no focus 141
  fearful patient 138–139
  food allergy and anxiety 139
  home environment issues 140
  obese cat 141–142
  obese patient with orthopedic disease 139–140
  too much fun/equipment cues 140–141
  motivation of
    case examples 138–142
Chartered Society of Physiotherapy 2
chemical pain
  causes of
    treatment of 34–35
Chinese herbal medicine
described 378
chiropractic adjustment 392–393
  veterinary technician’s role in 393–395, 394, 395f
chiropractic medicine 390–397
  for cats 395–396, 396f
  chiropractic adjustment 392–393
  historical background of 391
  introduction 390
  pain leading to 390
  patient evaluation in 393
  in physical rehabilitation
    role of 391
  VSC 391–392
chronic degenerative diseases
  rehabilitation for 15
circulatory disorders
  behavioral issues in geriatric patients
    related to 195
classical conditioning
  operant conditioning vs. 128–131, 129b, 129f, 130b, 131f
client/caregiver education
  rehabilitation technician in 18–19, 19f
client engagement
  in physical rehabilitation 97–99, 98f
client–patient bond
  in HEP client assessment 81–82

cognitive impairment
  in geriatric patients 191, 193–195, 193b, 195t
  weakness and 194
cold bath/immersion
  in cryotherapy 224–225, 225f
cold compression unit
  in cryotherapy 224, 224f
cold therapy. see also cryotherapy
  for cats 228
  in equine rehabilitation 353, 353f
  general recommendations for 227
  precautions with 228, 228b
  purpose of 219–220, 219b, 220t
Colorado State University Acute 29
comfort
  management of
    in home nursing care 211–212
commitment of patient
  in HEP client assessment 79–80
communication
  with adjunct team members 332
  in client engagement 98, 98f
  in physical rehabilitation 54–57, 55b, 56f
  with specialists and primary care veterinarian 331–332
compassion fatigue 216, 216f
compliance
  in physical rehabilitation 97–99, 98f
  with treatment plan 53–54
compression
  ischemic 64
  joint 73, 73f
  in STM 61
conditioning
  classical vs. operant 128–131, 129b, 129f, 130b, 131f
cone(s)
  weave
    in canine rehabilitation 291
    exercises using 296
contraction(s)
  isometric 287–288
  isotonic 288
  muscle 287–288
  contracture knots 399
contrast baths
  in cryotherapy 223–224
controlled leash walking
  in HEP 92, 92f
conversation(s)
  in client engagement 98, 98f
“cookie stretch” 90
core strengthening
  exercises for 297–298, 298f
counseling
  nutritional 109–126 see also nutritional counseling
coupling techniques
  in therapeutic ultrasound 265–266, 266f
CRAFT
  in engaging client in physical rehabilitation 98
cranial nerves
  evaluation of
    in neurological examination 167b
crawling
  in core strengthening 297–298, 298f
  as front limb exercise 300
cryotherapy 222–225, 224f, 225f
  agents in 223–225, 224f, 225f
  for cats 228
  contraindications to 228b
  in equine rehabilitation 353, 353f
  general recommendations for 226–227, 227b
  indications for 223t
  precautions with 228, 228b
  veterinary evidence for 226
current(s)
  in electrical stimulation 242, 242t, 243b
    AC 242, 243b
    classification of 243b
    DC 242, 243b
    pulsed current 242, 243b
cushions
  exercises using 296, 296f
custom orthotics
  for assisted ambulation 155–156, 156f
custom prosthetics for assisted ambulation 156–161 see also prosthetics, for assisted ambulation
CVMRT. see certified veterinary massage and rehabilitation therapist (CVMRT)
CVPP. see certified veterinary pain practitioner (CVPP)

d
DC. see direct current (DC)
decision making
  pain management–related 99–101, 100f
depth
  defecation
    in neurological patients nursing care for 174
degenerative myelopathy
  in dogs 177
demeanor
  in neurological patients nursing care for 175
density
  in hydrotherapy 308–309
developmental orthopedic diseases (DODs) 121
diagnosis(s)
  in treatment plan 50
diagonal leg lifts
  in core strengthening 297
diaper pads
  in home nursing care 207, 207f
diathermy 220
digestibility
  as factor in nutritional counseling 124
digging
  as front limb exercise 301
direct coupling 265
direct current (DC) 242, 243b
disability(ies)
  defined 27
  lower back pain and 390
disabled patients
  assistive devices and technology for 145–162 see also assistive devices, for disabled patients
  geriatric patients 187–204 see also geriatric patients
  home nursing care for 205–217
  neurological patients 163–186 see also neurological patients
discospondylitis
  in dogs 178
distress
  assessment of 29
DODs. see developmental orthopedic diseases (DODs)
dog(s)
  acupuncture for 383, 385b–386b, 385f–386f
  athletic
    hydrotherapy for 311–312
    rehabilitation for 15
  chronic pain scales for 29
  excitable
    case example 141
    geriatric 187–204 see also geriatric patients
    neurological conditions of 176–178
    with no focus
    case example 141
  passive neural exercises for 179–180
  physical rehabilitation for
    equipment in 289–293 see also physical rehabilitation equipment, canine
    pain related to 37–38
    therapeutic exercises for 180, 181b, 182f, 295–303 see also therapeutic exercise(s), canine
    thermotherapy for 180
    wheelchairs for
      historical background of 146
      working
        rehabilitation for 15
        WSAVA body condition score for 114f
        WSAVA muscle condition score for 115f
  drug(s). see also medication(s)
    behavioral issues in geriatric patients related to 195
dry needling 381, 381f
  in MTrPs management 404, 404f
duty cycle
  in electrical stimulation 244, 244b
  in therapeutic ultrasound 265
e
edema
  NMES for 250–251, 250f, 251b
  effleurage 62, 62f
elastic resistance bands
  in canine rehabilitation 292
electrical stimulation 241–261. see also electrotherapy
adverse effects of 248
amplitude of intensity in 243, 244f
contraindications to 247–248, 247b
currents in 242, 242t, 243b
described 241–242, 242t
frequency or pulse rate in 243–244, 244b
indications for 247b
on/off or duty cycle in 244, 244b
for pain control 253, 253f
patient preparation for 245, 245f
precaution with 245–246, 246f, 247f
pulse duration or pulse width in
243, 244f
ramp in 244–245, 244b
terminology related to 242–245, 244b
types of 241–242
uses of 241
for wound healing 251–252, 251b
electrical techniques
in equine rehabilitation 354–357, 355b, 356f
electro-acupuncture 37, 381, 382f
electrode(s)
in NMES
criteria for 252, 252b
electrohydraulic principle
in orthopedic shockwave machines 274–275, 274f, 275f
electrotherapy 241–261. see also electrical stimulation
described 241
for geriatric patients 199–200, 199f
introduction 241
in MTrPs management 403
elimination needs
maintaining functional
in home nursing care 211
embolism
fibrocartilaginous
in cats 178
end-of-life patients 104–106
after loss 106
incontinence in 104
medication considerations for 105
palliative care for 104–105
veterinary home hospice care for 104
when it is time to say goodbye 105–106
energy
as factor in nutritional counseling 122–123
engagement
client-related
in physical rehabilitation 97–99, 98f
environment(s)
emotional response–creating associations
with 129–131, 129b, 130b, 131f
in equine rehabilitation 350–351
as factor in HEP 83
home
modifying 214, 214b
modifications in
in physical rehabilitation and pain management 39–43, 40b–42b
equine rehabilitation 347–376
acupuncture in
clinical applications of 383
facilities, equipment, and personnel for 349–350
introduction 347–348
nutrition in 350
pain assessment in 44–45
pain related to 43–45, 44f
patient environment and mental status in 350–351
return to work after 369, 370t
therapeutic modalities 351–369
aquatic therapy 363–368, 363f, 367b
cold therapy 353, 353f
electrical techniques 354–357, 355b, 356f
ESWT 359
ground exercises 368–368f, 369f
heat therapy 354
hyperbaric oxygen therapy 360–362, 361b, 362b
kinesiology taping 368–369, 369f
LLLT 356–357, 356f
manual therapies 351–353
mechanical agents 357–360, 360f
MFR 351–352
mobilizations and manipulations 352–353
NMES 354, 355b, 356f
PEMF therapy 355
shockwave therapy 281, 281f
stretching and massage 351
TENS 354
equine rehabilitation (cont’d)
thereapeutic exercise 362–369, 363f, 367b, 368f, 369f
therapeutic ultrasound 357–359
thermal agents 353–354, 353f
whole-body vibration therapy 359–360, 359f
therapeutic monitoring in 348–349, 349f
therapeutic plan development for 348
equipment
in equine rehabilitation 349–350
as factor in HEP 83
ESWT. see extracorporeal shockwave therapy (ESWT)
exercise(s) 286–307. see also specific types
for cats 302–303
front limb
canine 300–301, 300f
for geriatric patients 200–201, 201f
hind limb
canine 298–299
home 79–94 see also home exercise(s); home exercise program (HEP)
initial instruction of 83–84
land 286–307
neurological rehabilitation
canine 301–302, 301f
passive neural
for neurological patients 179–180
pool-based
vs. UWTM 320–324, 320b, 320f, 322f
RCIG for 2
sport-specific
in HEP 93
strength
in HEP 93
therapeutic 286–307 see also specific types and therapeutic exercise(s)
in veterinary physical rehabilitation 7
treadmill-based 322–324
exercise physiology
role of 287–288
exercise program
principles of 288–289
extracorporeal shockwave therapy (ESWT) 273–285. see also shockwave therapy in equine rehabilitation 359
introduction 273–274
in veterinary physical rehabilitation 8
facilities
in equine rehabilitation 349–350
as factor in HEP 83
fat(s)
as factor in nutritional counseling 123
fatigue
compassion 216, 216f
swimming-related 320b
FCEM. see fibrocartilaginous embolic myelopathy (FCEM)
fearful patient
case example 138–139
fibrocartilaginous embolic myelopathy (FCEM)
in dogs 178
fibrocartilaginous embolism
in cats 178
figure eights
exercises using 296
finances
physical rehabilitation–related
discussion of 57
five element theory
of TCVM 379–380
flexibility
importance of 69
food allergies
challenges related to patient with case example 139
food rewards
motivation through 131–134, 134f
food therapy
described 379
frailty syndrome 196, 198f
frequency
in electrical stimulation 243–244, 244b
in therapeutic ultrasound 264
friction massage 63–64
front limb exercises
canine 300–301, 300f
“fun” swim 326
gait
evaluation of
in neurological examination 165, 166b, 169
as motivation 136
gel packs
  in cryotherapy  223
geriatric patients  187–204
  behavioral issues in  191, 193–195, 193b, 195t
  cardiopulmonary changes in  190b
  cognitive impairment in  191, 193–195, 193b, 195t
  signs of  193–194
described  188–191, 189t, 190b–193b, 191f
frailty syndrome in  196, 198f
immune changes in  191b
introduction  187–188
metabolic changes in  191b
muscle changes in  193b
musculoskeletal changes in  192b
nervous system changes in  192b
painful mobility issues in  39, 43
in palliative and hospice care
  physical medicine and rehabilitation for  202–203
physical rehabilitation for  15, 187–204 see also specific modalities, e.g., manual therapy, for geriatric patients
  electrotherapy  199–200, 199f
  exercise therapy  200–201, 201f
  health benefits of  198
  hydrotherapy  201–202, 202b
  manual therapy  198–199
physiologic changes in  188–191, 190b–193b, 191f
QoL of
  management strategies to improve  195–196, 197t
gerontology
  defined  187
Glasgow Composite Pain Scale  29, 33f
  goal(s)
    of exercise program
      in HEP client assessment  83
      rehabilitation
        in HEP client assessment  82
gold implantation  381–382
goniometer(s)
  in PROM treatment  66–67, 67f
goniometry
  defined  66
grip socks
  for assisted ambulation  148
ground exercises
  in equine rehabilitation  368–368f, 369f
ground poles
  in canine rehabilitation  290–291, 290f
“Guidelines for Alternative and Complementary Veterinary Medicine”  3
h
  hamstrings stretch  71t
handling skills
  in HEP client assessment  81
harness(es)
  for assisted ambulation  149–150
Healing Oasis
  certified rehabilitation veterinary technician education from  5
heat therapy  220–222, 220b, 221f, 222f
  for cats  228
  contraindications to  227b
deep heating  220
diathermy  220
in equine rehabilitation  354
general recommendations for  226–227, 227b
hot packs  220, 220b
  indications for  220, 220b
  precautions when using  227, 227b
  purpose of  219, 219b
superficial  220, 220b
superficial heating agents  7, 220–222, 220b, 221f, 222f
  veterinary evidence for  226
water  220–221, 221f, 222f
hemo-acupuncture  382
HEP. see home exercise program (HEP)
herbal medicine
  Chinese
    described  378
  high five salute
    as front limb exercise  300
hind limb exercises
  canine  298–299
home environment
  modifying
    in home nursing care  214, 214b
home environment issues
  case example  140
index
puppy water introduction classes 326
water safety courses 326
patients benefiting from 310–312, 310
physics of 308–310
pool vs. UWTM 320–324, 320f, 322f
pre-hydro patient assessment 317–319, 318b
client questionnaires in 317
coexisting disease–related 317–318
contraindications results from 318–319, 318b
incontinence patient–related 319
initial assessment 317
patient conformation–related 319
surgical wounds–related 318
principles of 308
refraction in 309–310
risks associated with
protecting staff and clients from 317
surface tension in 309
viscosity and resistance in 309
hydrotherapy business
promoting 326–327
hygiene care
in home nursing care 207–208, 208b
hyperbaric oxygen therapy
in equine rehabilitation 360–362, 361b, 362b
benefits from 360, 361b
contraindications to 362, 362b

i
ice massage
in cryotherapy 223
ice packs
in cryotherapy 223
ice water
towels in
in cryotherapy 223
impairment
defined 27
incline walking
as hind limb exercise 299
incontinence
in end-of-life patients 104
incontinent patients
hydrotherapy for
management of 319
indirect coupling 265–266, 266f
infrared lamps
in thermotherapy 221
in-home hospice care 215–216, 216b
intensity
amplitude of 243, 244f
in therapeutic ultrasound 264–265
intent
as factor in motivation 136
interaction with owners
reduced
behavioral issues in geriatric patients related to 194
Internal Association of Veterinary Rehabilitation and Physical Therapy 3
International Veterinary Academy of Pain Management 24, 32
intervertebral disc disease
in cats 178
in dogs 176–177
intraosseous transcutaneous amputation
prosthesis (ITAP) 157–158, 157f, 158f, 158b, 159b
ischemic compression 64
isometric contractions 287–288
isotonic contractions 288
ITAP. see intraosseous transcutaneous amputation prosthesis (ITAP)

j
joint compression 73, 73f
joint mobilization 74
joint problems
in neurological patients
nursing care for 175
joint range of motion (ROM) 64–69, 66f, 67f, 68t, 69t
described 64–65
frequency, intensity, and duration of 68
limitations of 65
standards for 67–69, 68t, 69t
treatment for
determining effectiveness of 66–67

k
keeping it positive
in therapy prescription 52, 52f
kinesiology taping
in equine rehabilitation 368–369, 369f
knot(s)
contracture 399
ladder walking
  as front limb exercise 301
  as hind limb exercise 299
lamp(s)
  infrared
    in thermotherapy 221
land treadmills
  in canine rehabilitation 292–293, 293b, 294b, 294f
language
  body
    understanding 131, 132f, 133f
laser(s). see also laser therapy
  classes of 232–233
  historical background of 231
  OSHA on 236
  photobiomodulation in
    mechanisms of action of 233–234
    physics of 231–232
    safety of 234–236, 235f, 236f
  types of 232
laser acupuncture 382–384
laser therapy 231–240. see also laser(s)
  acupuncture 382–384
  contraindications to 234
  for geriatric patients 199
  introduction 231
  mechanisms of action in
    for neurological patients 182
    in practice 237–238, 237f, 238t
    safety of 234–236, 235f, 236f
  in TPLO 238
learning styles
  in physical rehabilitation 54–55, 55b
leash walking
  controlled
    in HEP 92, 92f
legal issues
  rehabilitation technician–related 22
leg lifts
  diagonal
    in core strengthening 297
lift(s)
  hydraulic see also specific types, e.g.,
    Hoyer lift
  for assisted ambulation 152, 153f
ligament injuries
  shockwave therapy for 279–280, 280b
limb weights
  in canine rehabilitation 292
LLLT. see low-level laser therapy (LLLT)
loving on stairs/couch
  as hind limb exercise 299
lower back pain
  disability related to 390
low-level laser therapy (LLLT)
  in equine rehabilitation 356–357, 356f
  in MTrPs management 403
  in veterinary physical rehabilitation 7
luring 134–135, 135f
lymphatic drainage 74
  manual 74–75
m
manipulation
  in equine rehabilitation 352–353
  RCIG for 2
manual therapy 59–78. see also specific
t  techniques, e.g., soft tissue
    mobilization (STM)
  described 59
  in equine rehabilitation 351–353
  expected results of 60
  for geriatric patients 198–199
  goals of 59–60
  as HEP 75
  introduction 59
  joint compression 73, 73f
  joint mobilization 74
  lymphatic drainage 74–75
  MFR 74
  MTrPs 64, 403–404
  patient preparation for 60
  STM 60–64, 62f, 63f
  strain–counterstrain 74
  stretching 69–73, 70t, 71f, 71t, 72f
  techniques 59–78 see also specific
t  techniques
  in veterinary physical rehabilitation 7
marking behaviors 134–135, 135f
massage
  in equine rehabilitation 351
  friction 63–64
  in HEP 91
  ice
    in cryotherapy 223
for neurological patients 179–180
RCIG for 2
Tui-na 378–379
mechanical agents
in equine rehabilitation 357–360, 360f
mechanical pain
causes of
  treatment of 35–36
medication(s)
administration of
  in home nursing care 214–215
behavioral issues in geriatric patients
  related to 195
in end-of-life patients 105
mental status
  in equine rehabilitation 350–351
mentation
  evaluation of
    in neurological examination 165, 166b
meridians
  acupuncture points on 380–381
MFR. see myofascial release (MFR)
MLD. see manual lymphatic drainage (MLD)
mobility issues
  behavioral issues in geriatric patients
    related to 194
in home nursing care 208, 209f, 210f
pain management—related 103, 103f
pain-related
  in geriatric patients 39, 43
  reduced mobility
    behavioral issues in geriatric patients
      related to 194
mobilization
  in equine rehabilitation 352–353
joint 74
modified stretching 70, 71f
morbidly
  in undermining human–animal bond 96
motion
  arthrokinematic 65
  osteokinematic 65
  range of see specific types and range of motion (ROM)
motivation
  in HEP client assessment 82
  of patient 127–144
  challenging patients 138–142
classical conditioning vs. operant conditioning in 128–131, 129b, 129f, 130b, 131f
games in 136
home exercises in 136–137, 137f
intent and understanding trust in 136
luring in 134–135, 135f
problem solving in 138–142
reasons for 127–128
reinforcing behaviors in 128–129, 129f
through food rewards 131–134, 134f
understanding animal psychology in 128
understanding body language in 131, 132f, 133f
moxibustion 381
MPS. see myofascial pain syndrome (MPS)
MTrPs. see myofascial trigger point(s) (MTrPs)
MTrP therapy. see myofascial trigger point (MTrP) therapy
muscle contractions 287–288
muscle problems
  in neurological patients
    nursing care for 175
muscle strengthening
  NMES in 248–250, 249b, 249f, 250f
musculoskeletal disorders
  acupuncture for
    in equine rehabilitation 383
  in feline and canine rehabilitation 383
myasthenia gravis
  in dogs 177
myelopathy(ies)
  degenerative
    in dogs 177
  fibrocartilaginous embolic
    in dogs 178
myofascial pain syndrome (MPS)
  described 398–399
  MTrPs in 398–399
myofascial release (MFR) 74
  in equine rehabilitation 351–352
myofascial trigger point(s) (MTrPs) 64, 398–406. see also myofascial trigger point (MTrP) therapy
autonomic component of 399
causes of 399–400, 400f
described 398–399
introduction 398–399
motor component of 399
myofascial trigger point(s) (MTrPs) (cont’d)

patient evaluation for 401–402, 402f
perpetuation of 400–401
sensory component of 399

myofascial trigger point (MTrP) therapy
398–406. see also myofascial trigger point(s) (MTrPs)
described 402–404, 404f
dry needling 404, 404f
electrotherapy 403
invasive therapies 404, 404f
LLLT 403
manual therapies 403–404
MPS related to 398–399
non-invasive therapies 403–404
shockwave therapy 403
TPIs 404, 404f
ultrasound 403

cranial nerves in 167b
gait in 165, 166b, 169
mentation in 165, 166b
overview 165–169, 166b–168b, 168f
palpation for sensation in 167b, 168
patient history in 164
postural reactions in 166b, 168, 168f
spinal reflexes in 166b, 168
neurological patients 163–186
exercises for 301–302, 301f
goals for 179
home therapy for
client education and support
during 183
hospitalized
risks affecting 176
hydrotherapy for 311
introduction 163–164
laser therapy for 182
neurological conditions of 176–178
canine 176–178
feline 178
neurological examination for 164–170,
166b–168b, 168f–170f see also
neurological examination
neurological rehabilitation for
evidence-based information
about 170
NMES for 181–182
nursing care of 171–176, 171b172f, 173b
attitude-related 175
defecation-related 174
demeanor-related 175
muscle– and joint problems–related 175
nutrition-related 175–176
pain-related 175
patient positioning–related 175
respiratory system–related 171–172, 172f
skin care–related 174–175
toenail-related 175
urinary-related 172–174, 172f, 173b
passive neural exercises for 179–180
recumbent
risks affecting 176
therapeutic exercises for 180, 181b, 182f
therapeutic modalities for 180–182
neurological rehabilitation
evidence-based information about 170

n
National Association of Veterinary Technicians in America (NAVTA) 3
on becoming rehabilitation technician 13
NAVTA. see National Association of Veterinary Technicians in America (NAVTA)
negative reinforcements
positive reinforcements vs. 129, 129b
neoplastic disease
in dogs 177
nerve(s)
healing of 164
nervous system
anatomy of 163–164
components of 163
neurogenic pain
causes of
 treatment of 36
neurological disorders
acupuncture for
in equine rehabilitation 383
in feline and canine rehabilitation 383
behavioral issues in geriatric patients
related to 195
neurological examination 164–170,
166b–168b, 168f–170f
assessment of transitions in 169–170, 169f,
170f
basic exam 165
neurological rehabilitation exercises 301–302, 301f
neuromuscular electrical stimulation (NMES) for edema 250–251, 250f, 251b
electrode size and placement for 252, 252b
in equine rehabilitation 354, 355b, 356f
for geriatric patients 199f, 200
for muscle strengthening 248–250, 249b, 249f, 250f
for neurological patients 181–182
in veterinary physical rehabilitation 7
NMES. see neuromuscular electrical stimulation (NMES)
NorthEast Seminars
certified rehabilitation veterinary technician education from 5
NRS. see numerical rating scales (NRS)
umerical rating scales (NRS)
pain-related 29, 32f
nursing care
home 205–217 see also home nursing care of neurological patients 171–176, 171b, 172f, 173b see also neurological patients, nursing care of rehabilitation technician in 19
nutrigenomics
osteoarthritis and 119–121
nutrition
in equine rehabilitation 350
in neurological patients
nursing care for 175–176
weight and 111–112, 111b, 113f–116f
nutritional assessment 109–112, 111b
obesity and 110–111
questions related to 111b
weight evaluation in 111–112, 111b, 113f–116f
nutritional counseling 109–126
introduction 109
nutritional assessment in 109–112, 111b
nutritional factors in 122–124
calcium 123–124
carbohydrates 124
digestibility 124
energy 122–123
fats 123
phosphorus 123–124
protein 123
obesity-related 110–111
osteoarthritis-related 117–121 see also osteoarthritis
in pain management 102
patient assessment in 121–122
weight management program in 112, 117, 117b
O
obesity 110–111
in cats case example 141–142
causes of 110
health risks associated with 110–111
orthopedic disease and case example 139–140
prevalence of 110
obesity clinics
hydrotherapy programs in 325–326, 325f
Occupational Safety and Health Administration (OSHA)
on lasers 236
on/off cycle
in electrical stimulation 244, 244b
open water
swimming in 322, 322f
operant conditioning
classical conditioning vs. 128–131, 129b, 129f, 130b, 131f
opioid levels
increasing TENS in 36–37
orthopedic disease
obesity and case example 139–140
orthopedic patients
hydrotherapy for 310–311
orthopedic shockwave machines
electrohydraulic principle in 274–275, 274f, 275f
orthosis(es)
preamade for assisted ambulation 152–155, 154f
orthotics
custom for assisted ambulation 155–156, 156f
future directions in 23
OSHA. see Occupational Safety and Health Administration (OSHA)
osteitis 117–121
  described 117
  prevention of 118–119
  shockwave therapy for 279
  treatment of
    nutritional management in 119
    PEMF therapy in 255–256
    weight reduction in 117–118
osteoarthritis 117–121
  described 117
  nutrigenomics and 119–121
  prevention of 118–119
  shockwave therapy for 279
  treatment of
    nutritional management in 119
    PEMF therapy in 255–256
    weight reduction in 117–118
osteokinematic motion 65
osteotomy
  tibial plateau‐leveling
    laser therapy in 238

p
pain. see also specific types and causes, e.g.,
  mechanical pain
    acupuncture for
      in equine rehabilitation 383
      in feline and canine rehabilitation 383
    assessment of 28–32, 30t–31t, 32f–35f, 36b
    behavioral signs of 30t–31t
    in canine rehabilitation 37–38
    causes of
      treatment of 34–36
    chemical
      treatment of 34–35
    chiropractic techniques in relief of 390
    in equine rehabilitation 43–45, 44f
    assessment of 44–45
    evaluation of
      in neurological examination 167b, 168
      in feline physical rehabilitation 43, 44f
      introduction 26
    lower back
      disability related to 390
management of see pain management
  mechanical
    treatment of 35–36
  neurogenic
    treatment of 36
  in neurological patients
    nursing care for 175
perception of
  treatment in altering 36–37
  physical rehabilitation and 26–48
  introduction 26
  physiology of 96
  recognition of 28–32, 30t–31t, 32f–35f, 36b
  in undermining human–animal bond 96
  weakness and
    link between 38–39
pain control
  electrical stimulation in 253, 253f
  TENS for 253, 253f
pain management
  for chemical pain 34–35
  environmental modifications in 39–43, 40b–42b
  in home nursing care 211–212
  for mechanical pain 35–36
  for neurogenic pain 36
  protocols and education for 32
  rehabilitation as 34–37
  support for client and patient in 95–108
    behavioral changes 103–104
    client engagement 97–99, 98f
    compliance 97–99, 98f
    CRAFT 98
    decision making–related 99–101, 100f
    financial decisions related to 100–101
    improving QoL 102–103
    introduction 95–96
    medication considerations 105
    mobility issues 103, 103f
    pain physiology 96
    palliative care 104–105
    physical rehabilitation aims 97, 97f
    veterinary home hospice care 104
pain perception
  altering of
    treatment of 36–37
pain relief
  shockwave therapy for 278
pain scales
  chronic
    canine 29
    feline 32
  described 29, 32f
  limitations to 29–32, 32f–35f
pain scoring
  suggestions for 32
palliative care
  in end-of-life patients 104–105
  physical medicine and rehabilitation for
    patients in 202–203
palpation for sensation
  in neurological examination 167b, 168
paraffin baths
  in thermotherapy 221
passive neural exercises
  for neurological patients 179–180
passive range of motion (PROM)
  64–69, 66f, 67f, 68t, 69f
contraindications to 68–69
described 65, 66f
effectiveness of
determination of 66–67
in HEP 86–87, 88f
measurement of 66–67, 67f
for neurological patients 179
precautions with 68–69
technique 65–66, 66f
passive stretching 87–88
passive touch 62
patient(s)
motivating 127–144 see also motivation, of patient
patient advocate
  rehabilitation technician as 15–18
patient positioning
  of neurological patients 175
peanut balls
  in canine rehabilitation 289–290
pelvic limb muscle stretches 71f
PEMF. see pulsed electromagnetic field (PEMF) therapy
peripheral nerve injury
  in dogs 177
personnel
  in equine rehabilitation 349–350
pet owners
  in financial decisions 100–101
petrissage 62–63, 63f
phonophoresis
  therapeutic ultrasound in 267–269
phosphorus
  as factor in nutritional counseling 123–124
photobiomodulation
  mechanisms of action of 233–234
physical abilities
  in HEP client assessment 80–81
physical modalities
  in veterinary physical rehabilitation 7–8
physical rehabilitation. see also specific modalities
  aims of 97, 97f
  benefits of 26–28
  canine see dog(s)
  chiropractic medicine in
    role of 391
  communication in 54–57, 55b, 56f
described 1–2, 28
equine 347–376 see also equine rehabilitation
  finances related to
discussion of 57
  for geriatric patients 198–203 see also specific modalities and geriatric patients, physical rehabilitation for
  HEP in 79–94 see also home exercise(s); home exercise program (HEP)
introduction 1–10
learning styles in 54–55, 55b
in managing pain and restoring function
  97, 97f
manual therapy for 59–78 see also specific techniques and manual therapy
in pain management 34–37 see also pain management
pain related to 26–48 see also pain
treatment plan in 49–58 see also treatment plan
uses for 1–2
veterinary see veterinary physical rehabilitation
physical rehabilitation equipment
  canine 289–293
    balance discs or boards 291–292, 292f
cavaletti poles 290–291, 290f
    control, supportive, and assistive devices 295
elastic resistance bands 292
land treadmills 292–293, 293b, 294b, 294f
limb weights 292
planks/blocks/stairs 291
trampoline 292
weave pole and cones 291
physical therapist
  rehabilitation
    role of 12
role of 330
physical therapist assistant
  role of 12
physical therapy
  human
    history of 2
  veterinary
    history of 2
physio balls
  for neurological patients 301, 301f
physiologic changes
  in geriatric patients 188–191, 190b–193b, 191f
physio rolls
  in canine rehabilitation 289–290
physiotherapy 347
plank(s)
  in canine rehabilitation 291
planking on ball or BOSU
  in core strengthening 297–298
play bow 72f
  as front limb exercise 301
pneumo‐acupuncture 382
PNF. see proprioceptive neuromuscular facilitation (PNF)
polydipsia
  behavioral issues in geriatric patients related to 194–195
polyneuropathy(ies)
  in dogs 178
polyuria
  behavioral issues in geriatric patients related to 194–195
pool-based exercises
  active therapy 321–322
  static therapy 321
UWTM vs. 320–324, 320b, 320f, 322f
pool design
  hydrotherapy-related 312–313, 312f, 313b, 313f
positive reinforcements
  negative reinforcements vs. 129, 129b
post-surgical rehabilitation
  rehabilitation team in 334–336, 335b
postural reactions
  evaluation of
    in neurological examination 166b, 168, 168f
pre-hydro patient assessment 317–319, 318b.
  see also hydrotherapy, pre-hydro patient assessment
premade orthoses
  for assisted ambulation 152–155, 154f
primary care veterinarian
  rehabilitation team communication with 331–332
progress assessments 50, 50b
PROM. see passive range of motion (PROM)
proprioceptive exercises 295–297, 296f, 297f
  for cats 302
proprioceptive neuromuscular facilitation (PNF) for neurological patients 302
prosthetics
  for assisted ambulation 156–161
    follow-up care 159–161, 160f
    ITAP 157–158, 157f158b, 158f, 159b
      types of 157–158, 157f, 158f, 158b, 159b
    future directions in 23
historical background of 146
protein
  as factor in nutritional counseling 123
pulmonary current 242, 243b
pulsed electromagnetic field (PEMF) therapy 253–257
Assisi Loop in
  protocol for 256–257, 256f
in bone healing 254–255
described 253–254
in equine rehabilitation 355
for geriatric patients 200
in osteoarthritis management 255–256
in veterinary physical rehabilitation 8
in wound healing 254
pulsed electromagnetic field (PEMF) therapy
  bed or blanket 257
pulse duration
  in electrical stimulation 243, 244f
pulse rate
  in electrical stimulation 243–244, 244b
pulse width
  in electrical stimulation 243, 244f
puppy water introduction classes 326
q
Qi gong
  described 379
QoL. see quality of life (QoL)
quality of life (QoL)
assessing and improving
  in home nursing care  212–214, 212b
  in geriatric patients
    management strategies to improve
      195–196, 197t
  in pain management  102–103

r
ramp(s)
  for assisted ambulation  150
  in electrical stimulation  244–245, 244b
range of motion (ROM)
  active  64–65
  frequency, intensity, and duration of  68
  importance of  65
  joint  64–69, 66f, 67f, 68t, 69t
  limitations of  65
  passive  64–69, 66f, 67f, 68t, 69t
  standards for  67–69, 68t, 69t
RCIG. see Royal Central Institute of Gymnastics (RCIG)
refraction
  in hydrotherapy  309–310
regenerative therapies
  future directions in  23
rehabilitation
  for chronic degenerative diseases  15
  described  1–2
  equine  347–376
    pain related to  43–45, 44f
    introduction  1–10 see also physical rehabilitation
  neurological
    evidence-based information about  170
  post-surgical
    rehabilitation team in  334–336, 335b
rehabilitation goals
  in HEP client assessment  82
rehabilitation patients  14–15
  canine see dog(s)
  geriatric patients  15
  injured non-surgical  14–15
  patients with chronic degenerative disease  15
rehabilitation program
  for cats
    guidelines for  182–183
  equine see equine rehabilitation
  feline patients see cat(s)
rehabilitation team  11–25
  case management examples  332–346
    activity restrictions  336–338, 336f, 337b
    need for team  341–343, 341b, 342f
    post-surgical rehabilitation  334–336, 335b
    spinal surgery  338–341, 339b, 339f
    surgical implant failure  332–334, 332b, 333f, 334f
    working with adjunct professionals  343–346, 344b, 346f
  communicating with adjunct team members  332
  communicating with specialists and primary care veterinarian  331–332
    described  11–12
    introduction  11–13
    joining  11–25
    members of  12–13, 329–330
    adjunct  13
    need for  341–343, 341b, 342f
    physical therapist  330
    rehabilitation veterinarian  329–330
    rehabilitation veterinary technician  330
    troubleshooting as  329–346
      in case management  330–331, 331f
      introduction  329–330
rehabilitation technician
  in acupuncture  384
  approaching change in patient status  21, 21b, 22b
  becoming  13–14
  in chiropractic adjustment  393–395, 394, 395f
  future directions for  22–24, 24f
    hospice care  23–24
    orthotics and prosthetics  23
    regenerative therapies  23
  legal issues  22
  role of  12, 330
  specific organizations for  24
  team role as  15–19, 19f
    in client/caregiver education  18–19, 19f
    nursing care  19
    patient advocate  15–18
    providing prescribed therapies  18
    in therapeutic ultrasound  266, 267f
    working under supervision  20–22, 20f, 21b, 22b
    working with diagnosis and prescribed therapies  20, 20f
rehabilitation veterinarian
role of  12, 329–330
reinforcement(s)
  positive vs. negative  129, 129b
terminology related to  130b
reinforcing behaviors
  in motivating patient  128–129, 129f
resistance
  in hydrotherapy  309
respiratory system
  in neurological patients
    nursing care for  171–172, 172f
respite care  207
restlessness
  behavioral issues in geriatric patients
    related to  194
reward(s)
  food
    motivation through  131–134, 134f
reward-based training
  in therapy prescription  52, 52f
rhythmic stabilization
  exercises using  296–297
ROM. see range of motion (ROM)
Royal Central Institute of Gymnastics (RCIG)
  for massage, manipulation, and exercise  2
safety issues
  acupuncture-related  383–384
  laser therapy–related  234–236, 235f, 236f
salute
  high five
    as front limb exercise  300
SDS. see simple description scales (SDS)
sensation
  palpation for
    in neurological examination  167b, 168
shaping  134–135, 135f
shear
  in STM  61
shockwave(s)
  described  274–275, 274f, 275f
  mechanism of action of  275
  production of  274
shockwave therapy  273–285. see also
  extracorporeal shockwave therapy
    (ESWT)
adverse events related to  278–279
  in bone healing  280–281, 281f
clinical applications of  281–282, 282f
contraindications to  278–279
for geriatric patients  199–200
in horses  281, 281f
  indications for  279–281, 280b, 281b, 281f
  introduction  273–274
  in MTrPs management  403
  for osteoarthritis  279
  for pain relief  278
  patient preparation for  276–277, 276f–278f, 276t
  for tendon and ligament injuries  279–280, 280b
  treatment protocol  277–278
  in wound healing  280
side sit-up
  in core strengthening  298
side stepping
  as hind limb exercise  298–299
simple description scales (SDS)
  pain-related  29
sit-to-stand
  as hind limb exercise  298
sit up(s)
  side
    in core strengthening  298
sit up and beg
  in core strengthening  297
skin care
  in neurological patients
    nursing care for  174–175
slings  147, 147f
  for assisted ambulation  149–150
Snuglis
  for neurological patients  302
socks
  grip
    for assisted ambulation  148
soft tissue mobilization (STM)  60–64, 62f, 63f
  compression in  61, 64
  contraindications to  61
  described  60
  effects of  60–61
  effleurage  62, 62f
  forces in  61
  friction massage  63–64
  ischemic compression  64
  passive touch  62
  petrissage  62–63, 63f
  tapotement  63
Index

sound waves
  in therapeutic ultrasound 262–263
specialist(s)
  rehabilitation team communication with 331–332
spinal reflexes
  evaluation of
    in neurological examination 166b, 168
spinal surgery
  rehabilitation team in 338–341, 339b, 339f
splint(s)
  for assisted ambulation 152–153, 154f
spondylomyelopathy
  cervical
    in dogs 177–178
sport-specific exercises
  in HEP 93
stabilization
  rhythmic
    exercises using 296–297
stairs
  for assisted ambulation 150
  in canine rehabilitation 291
  as front limb exercise 300
  as hind limb exercise 299
standing
  assisted
    devices for 147, 147f, 148f
    for neurological patients 301
static stretching
  69–70, 70f, 71f, 71t, 88–89
stimulation methods
  with acupuncture 381–383, 381f, 382f
STM. see soft tissue mobilization (STM)
strain–counterstrain 74
strengthening
  core
    exercises for 297–298, 298f
  muscle
    NMES in 248–250, 249f, 249f, 250f
strength exercises
  in HEP 93
stretch(es)
  active 89–90, 89f, 90f
  “cookie” 90
  static 88–89
  types of 70t, 71f, 71t, 72f, 87–88
stretching
  69–73, 70t, 71f, 71t, 72f
  active 70, 72, 72f
  contraindications to 73
  in equine rehabilitation 351
flexibility and 69
frequency, intensity, and duration of
  in HEP 87–90, 89f, 90f
  modified 70, 71f
  passive 87–88
  precautions with 73
  static 69–70, 70t, 71f, 71t, 88–89
  techniques 69–73, 70t, 71f, 71t, 72f
superficial heat 220, 220b
superficial heating agents
  types of 220–222, 220b, 221f, 222f
supplement(s)
  in therapy prescription 53
supportive devices
  in canine rehabilitation 295
surface tension
  in hydrotherapy 309
surgical implant failure
  rehabilitation team in 332–334, 332b, 333f, 334f
swim
  “fun” 326
swimming
  anxiety and fatigue related to 320b
  in open water 322, 322f

t
tactile stimulation
  for neurological patients 302
tail pull injuries
  in cats 178
tapotement 63
TCVM. see Traditional Chinese Veterinary Medicine (TCVM)
technician(s)
  rehabilitation see rehabilitation technician
  “tender points” 74
tendon injuries
  shockwave therapy for 279–280, 280b
TENS. see transcutaneous electrical nerve stimulation (TENS)
tensile
  in STM 61
tensor bandaging
  for neurological patients 302
therapeutic exercise(s)
  286–307. see also exercise(s)
canine
  180, 181b, 182f, 295–303
  balance and proprioceptive exercises
    295–297, 296f, 297f
core strengthening 297–298, 298f
therapeutic exercise(s) (cont’d)
   equipment 289–293 see also physical rehabilitation equipment, canine
   front limb exercises 300–301, 300f
   hind limb exercises 298–299
   neurological rehabilitation exercises
   301–302, 301f
   case studies 303–305
   iliopsoas injury and partial cranial cruciate ligament tear 303–304
   intervertebral disc disease conservative management 304–305
   feline 302–303
   history of 286–287
   hydrotherapy 308–328
   introduction 286
   for neurological patients 180, 181b, 182f
   principles of exercise program 288–289
   therapeutic modalities 362–369, 363f, 367b, 368f, 369f
   in veterinary physical rehabilitation 7
   walking 295
   therapeutic ultrasound 262–272
   cavitation from 263–264
   chemical effects of 264
   clinical applications of 267–269, 267f, 268b
   clinical reports of 269
   contraindications to 269–270
   coupling techniques in 265–266, 266f
   dosage and treatment frequency 267
   duty cycle in 265
   in equine rehabilitation 357–359
   equipment maintenance 270
   frequency in 264
   for geriatric patients 199
   intensity in 264–265
   introduction 262
   in MTrPs management 403
   for neurological patients 180–181
   in phonophoresis 267–269
   physical principles of 262–264
   precautions with 269–270
   rehabilitation technician role in 266, 267f
   scientific research related to 270–271
   sound waves in 262–263
   thermal effects of 264
   transducer heads in 265, 265f
   treatment parameters 264–266, 265f, 266f
   therapy ball
   for assisted standing 147, 147f
   therapy prescription
   in treatment plan 50–53
   activity restrictions 51
   assistive devices 51
   keeping it positive 52, 52f
   prescriptions and supplements 53
   thermal agents
   in equine rehabilitation 353–354, 353f
   thermotherapy 218–230
   for cats 228
   cold
   purpose of 219–220, 219b, 220f
   veterinary evidence for 226
   contraindications to 227b
   cryotherapy 223–225, 224f, 225f
   described 218
   goal of 218
   heat in
   veterinary evidence for 226
   heating agents in 220–222, 220b, 221f, 222f
   see also specific types, e.g., paraffin baths
   purpose of 219, 219b
   introduction 218
   mechanism of action of 225
   for neurological patients 180
   paraffin baths in 221
   physiologic effects of 226
   precautions when using 227, 227b
   purpose of 218–220, 219b, 220f
   types of 220–225, 220b, 221f, 222f, 223b, 224f, 225f
   thoracic limb muscle stretches 70t
   Thundershirts
   for neurological patients 302
   tibial plateau‐leveling osteotomy (TPLO)
   laser therapy in 238
   toenails
   in neurological patients
   nursing care for 175
   too much fun/equipment cues
   challenges related to case example 140–141
   topical modalities
   pathophysiologic effects of 220, 220t
   in STM 61
   touch
   passive 62
   towels in ice water
   in cryotherapy 223
Index

TPIs. see trigger point injections (TPIs)
TPLO. see tibial plateau-leveling osteotomy (TPLO)
TPR techniques. see trigger point release (TPR) techniques
Traditional Chinese Veterinary Medicine (TCVM) 377–389. see also acupuncture branches of 378–379, 378f
clinical applications of
in feline and canine rehabilitation 383, 385b–388b, 385f–387f
five element theory of 379–380
yin yang theory of 379
training level
in HEP client assessment 82–83
trampoline
in canine rehabilitation 292
exercises using 296, 296f
transcutaneous electrical nerve stimulation (TENS)
in equine rehabilitation 354
for geriatric patients 199
in increasing opioid levels 36–37
in pain control 253, 253f
in veterinary physical rehabilitation 7
transducer heads
in therapeutic ultrasound 265, 265f
transition(s)
assessment of
in neurological examination 169–170, 169f, 170f
trauma
in cats 178
in dogs 177
treadmill(s)
land
in canine rehabilitation 292–293, 293b, 294b, 294f
underwater
hydrotherapy-related 313–314, 314b, 314f
treadmill-based exercises 322–324
treadmill training
for cats 302–303
gait-related
for neurological patients 302
treatment plan 49–58
adverse events and setbacks in 53
compliance with 53–54
diagnosis and 50
goals in 50
introduction 49–50
progress assessments and 50, 50b
therapy prescription in 50–53 see also therapy prescription, in treatment plan
trigger point injections (TPIs)
in MTrPs management 404, 404f
trigger point release (TPR) techniques 64
trust
understanding
as factor in motivation 136
Tui-na massage 378–379
tunnels
as front limb exercise 300
ultrasound
therapeutic 262–272 see also therapeutic ultrasound
ultrasound waves
absorption of 263
described 262–263
mechanical effects of 263–264
underwater treadmills (UWTMs)
hydrotherapy-related 313–314, 314b, 314f
pool-based exercise vs. 320–324, 320b, 320f, 322f
underwater treadmills (UWTMs)–based exercises 322–324
inclination in 323
session duration for 323–324
speed in 322–323
water depth in 323
water temperature in 323
urination problems
in neurological patients
nursing care for 172–174, 172f, 173b
UWTMs. see underwater treadmills (UWTMs)

U
value(s)
building of
through food rewards 131–134, 134f
vapocoolant sprays
in cryotherapy 224–225
VAS. see visual analog scales (VAS)
vertebral subluxation complex (VSC) 391–392
veterinarian(s)
  primary
  rehabilitation team communication with 331–332
rehabilitation
  role of 12, 329–330
  specific organizations for 24
veterinary home hospice care
  pain management–related 104
veterinary physical rehabilitation
  certified rehabilitation veterinary technician education sources for 5
  conditions that can benefit from 8, 8b
  duties related to 6–7
  history of 2–3
  manual techniques in 7
  physical modalities in 7–8
  specifics about 3–4
  technicians and nurses in 4–7
  therapeutic exercises in 7
veterinary rehabilitation technician. see rehabilitation technician
viscosity
  in hydrotherapy 309
visual analog scales (VAS)
  pain-related 29, 32
VSC. see vertebral subluxation complex (VSC)

W
walking
  assisted
    in HEP 91
  backward
    as hind limb exercise 298
  in canine rehabilitation 295
cavaletti
  as hind limb exercise 299
controlled leash
  in HEP 92, 92f
incline
  as hind limb exercise 299
ladder
  as front limb exercise 301
  as hind limb exercise 299
water
  in thermotherapy 220–221, 221f, 222f
  water safety courses 326
weakness
  cognitive dysfunction and 194
  defined 38
  pain and link between 38–39
weave cones
  in canine rehabilitation 291
  exercises using 296
weave poles
  in canine rehabilitation 291
weight(s)
  evaluation of 111–112, 111b, 113f–116f
  limb
    in canine rehabilitation 292
weight management program
  in nutritional counseling 112, 117, 117b
weight reduction
  in osteoarthritis management 117–118
weight shifting
  exercises using 296–297
  in HEP 91
  for neurological patients 301–302
wheelbarrow
  as front limb exercise 300–301, 300f
wheelchairs
  for assisted ambulation 150–151
  canine
    historical background of 146
whole-body vibration therapy
  in equine rehabilitation 359–360, 359f
working dogs
  rehabilitation for 15
wound healing
  electrical stimulation for 251–252, 251b
  PEMF therapy in 254
  shockwave therapy in 280
WSAVA body condition score
  for cats 113f
  for dogs 114f
WSAVA muscle condition score
  for cats 116f
  for dogs 115f

Y
yin yang theory
  of TCVM 379

Z
  Zink-Zeus get up
    as hind limb exercise 299