

# Index

Note: Page numbers followed by *f* indicate figures; *t*, tables; and *b*, boxes.

- A**  
Abattoir fever, 222  
Abnormal behavior, cause and appropriate action for, 20*t*  
Abuse  
  domestic violence and, 33  
  health care professional reporting, 33  
  potential for, 13  
  warning signs of, 34*b*  
Acariasis, 254  
Acetaminophen, toxicity of, 54, 55*t*  
Acid-fast bacilli (AFB), mycobacteria and, 282  
Active disease surveillance, 374–376  
Active living, built environment and, 37–38  
Active tuberculosis, 282–283  
Activities of daily living, pet ownership and, 28  
Acute care visit  
  animal contact history and, 12–13  
  screening/follow-up questions for, 13*t*  
Acute *Chlamydomphila* species conjunctivitis, in heifer, 137*f*  
Acute febrile illness, *Francisella tularensis* and, 289  
Acute toxic exposure, 52–57  
  household/environmental sources of, 55–57  
  identification of, 57  
  of medication, 54–55  
Aerosolized anthrax, release of, 114  
African elephant bluff-charge, 302*f*  
African hedgehog  
  *Salmonella* and, 310  
  view of, 310*f*  
Africanized bee, 80  
African tick fever, travel and, 303  
Agar gel immunodiffusion (AGID), 184  
Agricultural animal, animal cruelty laws and, 11  
Agricultural tourism, 302  
Agriculture, U.S. Department of, Animal and Plant Health Inspection Service (APHIS), 4  
Airborne dust particle, 41  
Airborne mold, 41  
Airway obstruction, recurrent, in companion animal, 47*t*  
Albendazole, for echinococcosis, 156–157  
Alcohol  
  toxicity in animals, 53*t*  
  use of, in veterinary practice, 360*t*  
Aldehyde, use of, in veterinary practice, 360*t*  
Aleppa ulcer, 186  
Algae bloom. *See* Harmful algae bloom  
Allergen  
  animal research facility worker and, 362  
  animal workers and, 345  
  as biological hazard, types of, 345  
  control strategies for, 346*t*  
  farm animal worker and, 367  
  sentinel events from, 41*t*  
  veterinary personnel and, 354  
  zoo/aquarium worker and, 364  
  *See also* specific types of  
Allergen load reduction, 47  
Allergic conditions, 43–49  
Allergy  
  to cats/dogs, 43–44  
  *See also* Animal allergy  
Allergy desensitization, 354  
Allergy skin test, 48*f*  
Alligator, West Nile virus in, 298  
Alligator bite, 325  
Alopecia  
  chemotherapy and, 314*f*  
  generalized, 48*f*  
Alphavirus (VEE/EEE), animal exposure to, implications of, 378*t*  
Alveolar cyst, 156*f*  
Alveolar echinococcosis, *Echinococcus multilocularis* and, 153  
Alveolar hydatid disease, 153  
*Amanita rubescens*, 56*f*  
*Amanita* toxin, 56  
Amantadine, 184  
*Amblyomma*, heartwater and, 310  
*Amblyomma cajennense*, 238  
American Association of Poison Control Centers  
  poisonous plants reported to, 56*t*  
  substances reported to  
    human exposures, 53*t*  
    nonhuman exposures, 54*t*  
  toxic agent percentages reported to, 54*t*  
American dog tick (*Dermacentor variabilis*), 159–160  
  Rocky Mountain spotted fever and, 237–238  
  sizes of, 199*f*  
American Medical Association (AMA)  
  One Health Initiative and, 5  
  One Health Task Force and, 5  
American Society for the Prevention of Cruelty to Animals (ASPCA), 53–54  
American Society of Heating, Ventilating, Refrigerating, and Air Conditioning Engineers (ASHRAE), 41  
American Veterinary Medical Association (AVMA)  
  animals after disaster, management of, 380  
  One Health Initiative and, 5  
  One Health Task Force and, 5  
Amikacin, 285  
Ammonia  
  acute toxic exposure to, 55–56  
  animal workers and, control strategies for, 346*t*  
  toxic exposure of, 58*t*  
Amoxicillin  
  bite infection, treatment for, 329*t*  
  for tularemia, 293*t*  
Amphibian, *Salmonella* prevention in, 248*b*  
Amphibian intoxication, 84–88  
  symptoms and treatment of, 85*t*  
Ampicillin, bite infection, treatment for, 329*t*  
Amyotrophic lateral sclerosis-parkinsonism dementia complex (ALS/PDC), 99–100  
Anaphylaxis, 45  
  from insect sting, treatment for, 80  
Anaplasma, 198  
*Anaplasmatataceae*, 158–159  
*Anaplasmatataceae phagocytophilum*, 159  
  geographic occurrence of, 159  
  hosts, reservoir species, vectors for, 159–160  
*Anaplasmatataceae platys*, 159  
  hosts, reservoir species, vectors for, 159–160  
Anaplasmosis  
  in animals, 161  
  cause of, 157–159  
  clinical presentation of, 162*t*  
  environmental risk factors for, 160–161  
  in goat, 161*f*  
  hosts, reservoir species, vectors for, 159–160  
  in human beings, 161  
  risk groups for, 159  
Anatoxin-a, HAB-related illness and, 97*t*  
*Ancylostoma*  
  effects of, 174  
  hookworm dermatitis and, 176  
  in visitation dogs, 31–32  
*Ancylostoma braziliense*, 174–175  
  cutaneous larva migrans and, 175  
  geographic occurrence of, 175  
  hosts, reservoir species, vectors for, 175  
  life cycle of, 175  
*Ancylostoma caninum*, 174–175  
  characteristics of, 175  
  geographic occurrence of, 175  
  hosts, reservoir species, vectors for, 175  
  life cycle of, 175  
*Ancylostoma ceylanicum*, 175  
Ancylostomiasis, 174  
Andes virus, 172  
Anesthetic agent, 359  
Anesthetic gas, animal workers and, control strategies for, 346*t*  
Angioedema, from insect sting, 80*f*  
Animal  
  allergic conditions in, 47–49  
  anthrax in  
    clinical presentation of, 116–117, 116*t*  
    diagnosis of, 118  
    treatment of, 118*t*  
  *Bartonella henselae* in, 121–122  
  bioterrorism exposure, 378*t*  
  brucellosis in, 126–127  
  *Campylobacter* disease in, 131  
  carbon monoxide poisoning in, 64  
  cat-scratch disease in, 121–122  
  *Chlamydomphila psittaci* in, 136  
  *Coxiella burnetii* and, 224  
  cryptosporidiosis in, 142–143  
  after disaster, management of, 380–383  
  disease/pathogen reported in, 110*t*  
  ehrlichiosis/anaplasmosis in, 161  
  *Escherichia coli* infection in, 166  
  as food, 1  
  foodborne illness, evaluation of, 340–341  
  giardiasis in, 170  
  hantavirus infection in, 174  
  healthy home with, checklist, 391*f*  
  hookworm infections in, 176  
  illegal importing of, 308–309  
  immunodeficient, care for, 318  
  LCM infection in, 208  
  lead toxicity in, 68–70  
  leishmaniasis in, 189–190  
  leptospirosis in, 194  
  Lyme disease in, 201–202  
  medication toxicity in, 54–55  
  MRSA in, 212  
  orf virus in, 216  
  pesticides used on, 73–76, 75*t*  
  pesticide toxicity in, 77  
  Pets Act, The, 379  
  plague in, 220  
  preventive environmental risk assessment for, 389–390  
  Q fever in, 225  
  rabies in, 231  
  Rift Valley fever in, 246  
  Rocky Mountain spotted fever in, 240

- Animal (*Continued*)
- Salmonella* in, 251–252
  - scabies and, 257–258
  - as sentinel, 51–52
  - toxic exposures in, 58*t*
  - toxoplasmosis in, 268–269
  - transmissible spongiform encephalopathy in, 273–274
  - tuberculosis in, 281–282
  - tularemia in, 292
  - West Nile virus in, 296–298
- Animal abuse. *See* Abuse
- Animal allergen, 345
- Animal allergy
- allergen load reduction, 47
  - anaphylaxis and, 45
  - animal/person, removal of, 46–47
  - asthma and, 44–45
  - diagnosis of, 46
  - in human beings, 43–44
  - management of, 46–47
  - rhinitis/upper airway symptoms and, 44
  - risk factors for, 44
  - sources of, 44*t*
- Animal and Plant Health Inspection Service (APHIS), 4
- Animal-assisted activity (AAA), 24
- benefits of, 27
  - contraindications for, 34
  - credentialing for, 30–31
  - exclusion criteria for, 32*t*
  - infectious disease/risks, minimizing, 31–32
  - psychological/psychosocial effects of, 26
  - recommendation, guidelines for, 29*t*
  - referral for, 29
  - social work and, 29
  - use of, 25
- Animal-assisted therapy (AAT), 24
- benefits of, 27
  - contraindications for, 34
  - credentialing for, 30–31
  - exclusion criteria for, 32*t*
  - infectious disease/risks, minimizing, 31–32
  - psychological/psychosocial effects of, 26
  - recommendation, guidelines for, 29*t*
  - referral for, 29
  - social work and, 29
  - use of, 25
- Animal bite, 300
- antibiotic prophylaxis and therapy, 325
  - epidemiologic characteristics of, 323*t*
  - in human beings
    - history of, 322–324
    - physical examination of, 324
    - prevention of, 322
  - immunocompromised individual and, 325
  - infection, risk factors for, 324*t*
  - prevalence of, 321
  - radiograph of, 324–325, 325*f*
  - wound, site for, 323*t*
- See also* Wound
- Animal bite, animal workers and, control strategies for, 346*t*
- Animal certification, for national/international movement, 341
- Animal contact, 12–13
- abuse/neglect, potential for, 13
  - checklist for, 14*f*
  - farm visits and, 302
  - at festivals, 302
  - risk reduction, counseling for, 300
  - travel and, 299
  - injuries and, 300–302
- Animal cruelty law, agricultural animals and, 11
- Animal dander, as indoor air contaminant, 38–39
- Animal disease/illness
- human health and, 18–19
  - consequences of, 18–19
- Animal disease symptoms
- human health and
    - cause and appropriate action for, 20*t*
    - relevance to, 19, 19*f*
- Animal feed
- foodborne illness risk and, 332–333, 332*t*
  - occupational exposure to, 333*b*
- Animal health
- environmental, human and, 2*f*
  - ethical principles in, 11
  - human health and, 1
    - convergence of, 7–8
    - zoonotic disease and, 1–3
- Animal health risk assessment form, 16*f*
- Animal hide, as souvenir, 304–305
- Animal-human disease transmission, immunodeficiency and, 315
- Animal husbandry
- immunocompromised individual and, 317–318
  - occupational pathogens and, 367*t*
- Animal Poison Control Center, 53–54
- Animal research facility worker
- allergens and, 362
  - chemical hazards and, 363
  - herpes B infection and, 362
  - HIV and, 363
  - injury, exposure, illness management for, 364
  - lymphocytic choriomeningitis and, 363
  - measles and, 362–363
  - medical surveillance for, 364
  - occupational medicine services for, 362–364
  - physical hazards and, 363
  - preplacement screening of, 363–364
  - psychosocial hazards and, 363
  - Q fever and, 363
  - rat-bite fever (streptobacillosis), 363
  - tuberculosis and, 363
  - vaccinations and, 364
  - viral hepatitis and, 363
  - zoonotic disease and, 362–363
- Animal sentinel
- for arbovirus detection, 376*f*
  - as disease surveillance system, 376
  - for pathogen/chemical warfare, 376–377
- Animal shelter
- health/disease control at, 381*b*
  - injury/illness prevention at, 382*b*
- Animal slaughter, anthrax and, 302
- Animal travel, 299
- Animal welfare, freedoms of, 11*b*
- Animal workers
- allergens and, 345
  - asthma in
    - prevention of, 358*b*
    - symptoms of, 353*b*
  - biological hazards and
    - allergens as, 345
    - biological, 345–348
    - zoonotic pathogens as, 345–347
  - chemical hazards and, 348–349
  - hazard card for, 353*f*
  - hazards and
    - control strategies for, 346*t*
    - types of, 345
  - medical questionnaire for, 350*f*
  - occupational health of, 343–371
  - preplacement screening of, 349–351
  - psychosocial hazards and, 349
  - risk assessment for, 351
  - training for, 351
  - types of, 344
  - vaccinations and, 351
  - zoonotic pathogens and, 345–347
- Antemortem toxicology testing, samples needed for, 59*t*
- Anthozoa (Sea anemone) sting, 88, 89*t*
- Anthrax
- acquiring, routes of, 2*f*
  - animal carcass and, 118
  - animal exposure to, implications of, 378*t*
  - animal husbandry and, 367*t*
  - in animals
    - clinical presentation of, 116–117, 116*t*
    - diagnosis of, 118
    - treatment of, 118*t*
  - bushmeat and, 303–304
  - camel slaughter and, 302
  - causative agents of, 113
  - environmental risk of, 114
  - example of, 23*f*
  - geographic occurrence of, 113–114
  - hosts, reservoir species, vectors for, 114
  - in human beings
    - clinical presentation in, 116*t*
    - diagnosis of, 116–117
    - treatment of, 118, 118*t*
    - types of, 115–116
  - life cycle of, 115*f*
  - outbreaks of, 106–107
  - risk groups for, 114
  - transmission of, 114
- See also* Cutaneous anthrax
- Anthrax vaccine, 118–119
- Anthropophilic dermatophyte
- classification of, 145*t*
  - transmission of, 144
- Antibiotic-resistant *Escherichia coli*, in visitation dogs, 31–32
- Antifreeze
- acute toxic exposure to, 55
  - toxic exposure of, 58*t*
- Antimicrobial prophylaxis, 118–119
- Antivenin
- for snakebite, 82–83
  - for spider bite, 81
- Antiviral medication, types of, 184
- Anxiety, animal interaction reducing, 26
- Aquarium, in long-term care setting, 26, 27*f*
- Aquarium worker. *See* Zoo/aquarium worker
- Arboviral disease, 294
- animal sentinel for, 376*f*
- Arenaviridae*, 205–206
- Arthritis, cause and appropriate action, 21*t*
- Arthropod, animal workers and
- control strategies for, 346*t*
  - exposure to, 348
- Arthropod-borne disease (arboviral), 294
- Ascariasis, 261
- Asia, travel advisory for, 302
- Aspirin, toxicity of, 54, 55*t*
- Association of Reptilian and Amphibian Veterinarians, *Salmonella* brochure by, 250*f*
- Asthma, 44–45
- in companion animal, 47*t*
  - work-related
    - prevention of, 358*b*
    - symptoms of, 353*b*
- Ataxia, cause and appropriate action for, 20*t*
- Atopic dermatitis, 46
- in companion animal, 47*t*
  - diagnosis/treatment of, 48–49
- Atopy
- in dog, 48*f*
  - in feline, 48*f*
- Atypical cutaneous leishmaniasis, 188
- Atypical mycobacterial infection, 276
- Atypical pneumonia, bird exposure and, 136
- Audiometry at baseline, for animal workers, 350–351
- Australian pressure-immobilization technique, 87*f*
- Australian Q fever, 222
- Autism spectrum disorder, animal interaction and, 27

- Autopsy, necropsy rate versus, 3
- Avian flu, 177
- Avian influenza
- animal husbandry and, 367*t*
  - animal workers and, 345–347
  - chicken manure and, 333
  - classification of, 181, 182
  - effects of, 183–184
  - farm visits and, 302
  - hosts, reservoir species, vectors for, 181
  - live bird market and, 302–303
  - risk factors for, 182
- Avian salpingitis, 252*f*
- Avian tuberculosis, 276
- cause of, 287
  - clinical presentation of, 287–288
- Avian vacuolar myelinopathy (AVM), 99–100
- Avocado, toxicity in animals, 53*t*
- Azithromycin, bite infection, treatment for, 329*t*
- B**
- Babesia, 198
- Babesia bigemina, 5
- Babesiosis, acquiring, routes of, 2*f*
- Bacillary angiomatosis, 122*t*
- Bacillus anthracis*, 113
- animal husbandry and, 367*t*
  - characteristics of, 113
  - drum head contamination by, 114*f*
  - photomicrograph of, 114*f*
- Backyard, healthy, 390
- checklist for, 392*f*
- Bacteremia, anthrax and, 115–116
- Bacterial enteritis
- Campylobacter* species and, 128
  - travel and, 303
- Bacterial pneumonia
- influenza and, 177
  - radiographs showing, 181*f*
- Baghdad boil, 186
- Bait, toxicology testing and, 59*t*
- Balkan influenza, 222
- Bang's disease, 123
- Bartonella elizabethae*, 122*t*
- Bartonella henselae*
- in animals, 121–122
  - characteristics of, 120
  - clinical presentation of, 122*t*
  - transmission/life cycle of, 121, 121*f*
  - treatment of, 122*t*
- Bartonella* infection
- cat bite/scratches and, 328
  - causative agent for, 119
  - clinical presentation of, 122*t*
  - diagnosis of, 122
  - environmental risk factors for, 121
  - exposure to, reducing, 316
  - HIV-infected person and, 319*t*
  - travel and, 300
  - treatment of, 122–123
- Bartonella* spp.
- disease, reservoir species, vectors for, 120*t*
  - hosts, reservoir species, vectors for, 120–121
- Bartonella vinsonii* subsp. *arupensis*, 122*t*
- Bartonella vinsonii* subsp. *Berkhoffii*, 122*t*
- Bat, as disease reservoir, 303
- Baylisascaris procyonis*, 261–262
- Beach
- animal contact and, 304
  - inspection and regulation of, 379*t*
- Behavior
- abnormal, cause and appropriate action for, 20*t*
  - concerns for, animal shelter guidelines for, 381*b*
  - human, pets as indicators of, 33–34
  - problems with, educating about, 9–10
- Behavioral evaluation, for therapy dog, 32*f*
- Beneficence
- animal health and, 11
  - definition of, 10–11
- Biguanide, 360*t*
- Biliary tract, cryptosporidiosis in, 140
- Bioaerosol, as indoor air contaminant, 39*t*
- Biological hazard
- allergens as, 345
  - control strategies for, 346*t*
  - zoonotic pathogens as, 345–347
- Biological warfare, *Yersinia pestis* as, 219
- Bioterrorism agent
- animal exposure to, implications of, 378*t*
  - Category A, *Bacillus anthracis* as, 113
  - Category B
    - Burkholderia mallei* as, 113
    - Pseudomonas pseudomallei* bacteria as, 108*t*
- Bird
- breast/leg meat, removal of, 2*f*
  - carboxyhemoglobin and, 64
  - Chlamydiae* infection in, 137*t*
  - HIV-infected person and, 319*t*
  - lead toxicity in, 68–69, 69*t*
  - sick, animal shelter guidelines for, 381*b*
  - toxic exposures in, 58*t*
  - West Nile virus and, 296–297, 297*t*
  - See also *Chlamydophila psittaci*
- Bird fancier's lung, 45
- Bird flu, 177
- Bison goring, 302*f*
- Bite
- animal workers and, control strategies for, 346*t*
  - dog quarantine after, 379*t*
  - from monkey, 362
- Black Creek Canal Hantavirus, 172
- Black Death, 218
- Blacklegged tick. See *Ixodes scapularis*
- Black widow spider
- neurotoxic envenomation from, 81
  - picture of, 81*f*
- Blastomyces*, animal workers and, 348
- Blastomycosis, 348
- Bleach
- acute toxic exposure to, 55–56
  - toxic exposure of, 58*t*
- Blood, toxicology testing and, 59*t*
- Blood lead level, treatment and, 70*t*
- Body fluid, toxicology testing and, 59*t*
- Bone, toxicology testing and, 59*t*
- Bone disease, nontuberculosis mycobacteria and, 287
- Bordetella*, 108*t*
- Bordetella bronchiseptica*, 316
- Borrelia burgdorferi*, 195–196
- cystic form of, 197*f*
  - micrograph of, 197*f*
  - transmission/life cycle of, 198
- Borrelia burgdorferi sensu stricto*, 196
- Borrelial arthritis, in dog, 202*f*
- Borrelia* species, 196
- Botulism
- animal exposure to, implications of, 378*t*
  - in cow/cattle, 338*f*
  - in dog, 335
  - overview of, 335
- Bovine amyloid spongiform encephalopathy (BASE), 273
- Bovine hypersensitivity pneumonitis (HP), 49
- Bovine spongiform encephalopathy (BSE), 271
- in cattle, 273*f*
  - clinical presentation of, 275*t*
  - diagnosis of, 275
  - hosts, reservoir species, vectors for, 272
  - outbreak of, 271
  - signs and symptoms of, 273
  - transmission/life cycle of, 272
  - transmission of, 272
  - variant Creutzfeldt-Jakob disease and, 273
- Bovine tuberculosis, travel and, 303
- Box jellyfish
- envenomation from, 88
  - picture of, 90*f*
  - sting, treatment of, 90*f*
- Brain, toxicology testing and, 59*t*
- Breast cancer, 58–59
- Breathing, labored, cause and appropriate action
- for human health care provider, 20*t*
  - for veterinarian, 21*t*
- Brevetoxin
- effects of, 95*t*, 101
  - Karenia brevis* producing, 94
  - toxicity of, humans versus animals, 99*t*
- Broken bone, cause and appropriate action, 21*t*
- Bromethalin
- hindlimb ataxia from, 57*f*
  - toxic effects of, 57
  - toxic exposure of, 58*t*
- Bronchus epithelium, bronchus, 40*f*
- Brown bat (*Eptesicus fuscus*), rabies and, 232*f*
- Brown dog tick, 159, 238*f*
- Brown recluse spider
- envenomation from, 81
  - picture of, 81*f*
- Brucella*
- animal husbandry and, 367*t*
  - hosts for, 124*t*
  - species of, 124
- Brucella abortus*, 124
- clinical presentation of, 124, 125*t*
  - in cow/cattle, 126
- Brucella melitensis*, 124
- clinical presentation of, 124, 125*t*
- Brucella ovis*, 126
- Brucellosis
- animal exposure to, implications of, 378*t*
  - in animals, 126–127
  - cause of, 124
  - clinical presentation of, 125*t*
  - diagnosis of, 127
  - discitis/spondylitis from, 126*f*
  - environmental risk factors for, 125*f*, 126
  - farm visits and, 302
  - geographic occurrence of, 124
  - hosts, reservoir species, vectors for, 124–125
  - in human beings, 126
  - overview of, 123
  - postexposure prophylaxis for, 127
  - risk groups for, 124
  - transmission/life cycle of, 125–126
  - treatment of, 127, 127*t*
- Bruising, cause and appropriate action, 21*t*
- Bubonic plague
- clinical presentation of, 221*t*
  - in human beings, 220
  - treatment of, 222*t*
- Bufo marinus* (cane/marine toad), 88*f*
- Building, with lead contamination, inspection and regulation of, 379*t*
- Built environment
- active living and, 37–38
  - animals, effect on, 38
  - clinical conditions related to, 38, 39*t*
  - definition of, 37
  - health hazards and, 39*t*
  - healthy communities as, 38
- Bunyaviridae* family, 243, 243*f*
- Bunyavirus, 172
- Burkholderia mallei*, 113
- Buruli ulcer, *Mycobacteria ulcerans* and, 287
- Bushmeat
- amount sold and types of, 304*t*
  - consumption of, 303–304
  - as delicacy, 303–304
  - South African market selling, 303*f*
  - viruses associated with, 367*t*

- C**
- Cadmium-induced renal disease, environmental exposures and, 60*t*
- Caffeine, toxicity in animals, 53*t*
- Cavalryman's scabies, 254
- Campylobacter*
- animal husbandry and, 367*t*
  - animal workers and, 345–347
  - chicken sashimi and, 303
- Campylobacter coli*, bacterial enteritis and, 128
- Campylobacter* disease
- farm visits and, 302
  - in human beings, 130–131
- Campylobacter fetus*, 128
- characteristics of, 130
- Campylobacteriosis
- in animals, 131
  - clinical presentation of, 132*t*
  - diagnosis of, 131–132
  - treatment of, 132*t*
    - in animals, 132–133
    - in human beings, 132
- Campylobacter jejuni*
- bacterial enteritis and, 128
  - case study for, 129*b*
  - presentation/management of, 336*t*
- Campylobacter* species
- canine fecal smear of, 130*f*
  - characteristics of, 129–130
  - dark-field microscopy of, 129*f*
  - effects of, 128
  - electron micrograph of, 129*f*
  - environmental risk factors for, 130, 131*f*
  - geographic occurrence of, 130
  - hosts, reservoir species, vectors for, 130
  - risk groups for, 130
  - transmission/life cycle of, 130
- Canary
- carbon monoxide and, 52, 61–62
  - mines and, 50
  - photo of, 52*f*
- Cancer
- chronic toxic exposures and, 57–60
  - environmental exposures and, 59–60, 60*t*
- Canine distemper, 107*t*
- Canine eosinophilic bronchopneumopathy
- in companion animal, 47*t*
  - diagnosis/treatment of, 48
- Canine flu, 177
- Canine hemorrhagic fever, 157
- Canine influenza, 183
- Canine leishmaniasis, 189*f*
- Canine monocytic ehrlichiosis, 157
- Canine parvovirus infection, 107*t*
- Canine rickettsiosis, 157
- Canine scabies, 258*f*
- Canine typhus, 157
- Capnocytophaga canimorsus*, 328
- Capnocytophaga* infection, 328
- Carbamate*
- animal toxicity from, 76
  - poisoning from, 77
  - use of, in animals, 75*t*
- Carbon dioxide, measurements of, 41
- Carbon monoxide
- canaries and, 52
  - characteristics of, 62
  - exposure to
    - metabolism and routes of, 62
    - prevention of, 62*b*
  - poisoning from, 61–62
    - acute/chronic effects of, 63
    - in animals, 64
    - infarction from, 64*f*
    - management of, 65*f*
    - risk groups for, 63
    - treatment of, 64–65
  - toxicity of, humans versus animals, 64*t*, 67*f*
- Carboxyhemoglobin (COHb)
- air levels of, 64
  - dogs and, 64
  - effects of, 63, 63*f*
  - formation and characteristics of, 62–63
  - in smokers, 63
- Cat
- allergy to, 43–44
  - bite infection, treatment for, 329*t*
  - black widow envenomation and, 82
  - Chlamydiae* infection in, 137*t*
  - cryptosporidiosis in, 142–143
  - dog bite in, 328*f*
  - Escherichia coli* infection in, 166, 166*t*
  - HIV-infected person and, 319*t*
  - as mercury poisoning sentinel, 60
  - plague in, 220
  - toxicant exposure and, 58*t*
    - indoors, 52
    - outdoors, 52
  - toxoplasmosis and, 265
  - tularemia in, 292, 293*t*
  - West Nile virus in, 297*t*, 297–298
  - See also Toxocara infection
- Cat bite
- abscess on wrist, 324*f*
  - Bartonella* infection from, 328
  - epidemiologic characteristics of, 323*t*
  - infection risk from, 325
- Category A bioterrorism agent, anthrax as, 113
- Caterpillar, 80–81
- Cat mascot, for older adult, 25–26
- Cat-scratch disease (CSD), 328
- in animals, 121–122
  - causative agent for, 119
  - diagnosis of, 122
  - enlarged lymph nodes from, 121*f*
  - in human beings, 121
  - risk groups for, 120
  - treatment of, 122–123, 122*t*
- Cattle
- botulism in, 338*f*
  - bovine spongiform encephalopathy in, 273*f*
  - brucellosis in, 126
  - dermatophytosis in, 146
  - Escherichia coli* infection in, 166, 166*f*, 166*t*
  - granulomatous enteritis/Johne's disease in, 287*f*
  - HAB-related illness in, 99*t*
  - hypersensitivity pneumonitis in, 47*t*, 49
  - lead toxicity in, 68, 69*f*, 69*t*
  - listeriosis in, 338*f*
  - with rabies, 233*f*
  - tuberculin skin test in, 284
  - tuberculosis in, 281, 285
  - viruses associated with, 367*t*
- Cattle fever, 5
- Cattle silage, hazards of, 348–349
- Cefotaxime, bite infection, treatment for, 329*t*
- Cellular prion protein (PrP<sup>c</sup>), transmissible spongiform encephalopathy and, 272
- Centers for Disease Control and Prevention
- animals after disaster, management of, 380
  - Asia, travel advisory for, 302
  - Bacillus anthracis*, 113
  - calf, outbreak investigation of, 4*f*
  - EIS training at, 4
  - foodborne illness, cases of, 331
  - inhalation anthrax screening guidelines for, 117*f*
  - monkey scratch/bite guidelines, 362–363
  - psittacosis, surveillance criteria for, 137
  - Special Pathogens Unit at, 4
  - travel regulations by, 306
  - veterinarian role at, 4
- Central nervous system, lead exposure and, 67–68
- Cerebrospinal fluid, toxicology testing and, 59*t*
- Cervidae, tuberculosis in, 281
- Chagas disease, 108*t*
- Chamois, with clinical scabies, 258*f*
- Chelation therapy, 68
- guidelines for, 71*t*
  - indications for, 70
- Chemical
- as indoor air contaminant, 38–39, 39*t*
  - intentional release of, 376–377
- Chemical hazard
- animal workers and
    - control strategies for, 346*t*
    - types of, 348–349
  - farm animal worker and, 367–368
  - veterinary personnel and, 358–359
  - zoo/aquarium worker and, 365
- Chemotherapy, alopecia and, 314*f*
- Cheyletia* species, 255
- zoonotic potential of, 255*t*
- Chicken
- carboxyhemoglobin and, 64
  - Salmonella* and, 316
- Chicken sashimi, *Campylobacter* and, 303
- Chiclero ulcer, 186
- Chikungunya, 108*t*
- travel and, 303
- Child proofing, 51
- Children
- Dipylidiasis in, 150–152, 151*f*
  - lead exposure and, 66–67
    - risk of, 68
    - toxicity of, 68
  - therapeutic horsemanship for, 26
  - Visceral larva migrans in, 263
- Chirodopoid box jellyfish, 88
- Chives, toxicity in animals, 53*t*
- Chlamydia*, *Chlamydomydia* versus, 135*t*
- Chlamydiae* infection, 137*t*
- Chlamydial* conjunctivitis, conjunctival scraping of, 138*f*
- Chlamydia trachomatis*, 138
- Chlamydomydia*
- animal husbandry and, 367*t*
  - farm visits and, 302
- Chlamydomydia abortus*, pregnancy and, 136
- Chlamydomydia psittaci*
- in animals, 136
  - animal workers and, 345–347
  - atypical pneumonia and, 136
  - cause of, 133
  - chest radiograph of girl with, 136*f*
  - Chlamydia* versus, 135*t*
  - diagnosis of, 136–138
  - environmental risk factors for, 135
  - hosts, reservoir species, vectors for, 135
  - in human beings, 135–136
  - necropsy, diagnosis by, 137–138
  - pregnancy and, 136
  - prevention of, 134*b*
  - risk groups for, 135
  - strains of, 134–135
  - transmission/life cycle of, 135, 136*f*
  - treatment of, 138, 138*t*
- Chloramphenicol
- bite infection, treatment for, 329*t*
  - for tularemia, 293*t*
- Chocolate
- animal exposure frequency, 54*t*
  - toxicity in animals, 53*t*
- Chorioretinitis, 207*f*
- Chronic toxic exposure
- cancer and, 57–60
  - health effects of, 57
- Chronic wasting disease (CWD) of deer and elk, 271
- clinical presentation of, 275*t*
  - diagnosis of, 275
  - environmental risk factors for, 272–273

- geographic occurrence of, 272  
 host for, 272  
 signs and symptoms of, 273  
 in wapiti, 274f
- Ciguatera fish poisoning, 101
- Ciguatoxin, 95t
- Ciprofloxacin, for tularemia, 293t
- Cleaning product  
 acute toxic exposure to, 55–56  
 toxic exposure of, 58t
- Clindamycin, bite infection, treatment for, 329t
- Clinical health history  
 approach to, 12–17  
*See also* Medical history
- Clinical scabies, chamois with, 258f
- Clinician. *See* Human health clinician; physician
- Clonorchis sinensis*, 303
- Clostridial food poisoning, 335
- Clostridium botulinum*  
 overview of, 335  
 presentation/management of, 336t
- Clostridium difficile*, in visitation dogs, 31–32
- Clostridium perfringens*  
 overview of, 335  
 presentation/management of, 336t
- Cochliomyia hominivorax*, 217
- Coelenterate envenomation, 88
- Coffee, toxicity in animals, 53t
- Colibacillosis, 164
- Collaboration  
 human-animal medicine and, 5  
 public/human/animal health professionals and, 7
- Communication  
 human-animal medicine and, 4–5  
 medical provider to veterinarian, human-animal medicine issue, 387b  
 public/human/animal health professionals and, 7  
*See also* Disease surveillance; Letter
- Community, building healthy, 38
- Community-dwelling older adult, “loaner” dog and, 26–27
- Companion animal  
 allergic conditions/diseases in, 47t  
 feline asthma as, 47–48  
 types of, 47t  
 bite infection, treatment for, 329t  
 contaminated fish and, 102  
 cyanobacteria toxins and, 100  
 home health assessment of, 13  
 lead toxicity in, 68, 69t  
 pet trade and, 309  
 service animal versus, 26  
 tuberculosis in, 282, 285–286  
*See also* Pet
- Comparative oncology, 58–59
- Congenital toxoplasmosis  
 clinical presentation of, 270t  
 with hydrocephalus, 269f
- Conjunctivitis, *Chlamydomophila psittaci* and  
 in cats, 136  
 in crocodile, 137f
- Consumer  
 foodborne illness risk and, 332t
- Consumer, foodborne illness risk and, 334–335
- Contagious abortion, 123
- Contaminant, in indoor air, 41t  
 identification/evaluation of, 40–41  
 types of, 39t
- Copperhead snake, tissue necrosis from, 83f
- Coronavirus, SARS-like, 303
- Cortisol level, animal interaction and, 26
- Coughing, cause and appropriate action  
 for human health care provider, 20t  
 for veterinarian, 21t
- Coxiella*, animal husbandry and, 367t
- Coxiella burnetii*, 222  
 environmental risk factors for, 224–225  
 geographic occurrence of, 223  
 reservoir for, 224  
 as Select Agent, 225
- Coxiella burnetii*-infected caprine placenta, 223f
- Coxiellosis, 222
- Creeping eruption, 174  
 from beaches, 304
- Creutzfeldt-Jakob disease (CJD), 271  
 diagnosis of, 274  
 transmission of, 272–273  
 treatment of, 275–276  
 variants of, 273
- Crocodile, *Chlamydomophila psittaci* and, 137f
- Crotalid envenomation, 83f  
 symptoms and treatment of, 85t
- Crusted scabies, 254  
 clinical presentation of, 257t  
 occurrence of, 257  
 treatment of, 259t
- Crusting  
 cause and appropriate action for, 20t  
 dermatophytosis and, 22f
- Cryptococcus*  
 animal workers and, 348  
 cockatoo shedding, 316–317
- Cryptococcus neoformans*, 348
- Cryptosporidia baileyi*, 141
- Cryptosporidia hominis*, 140t  
 reservoir for, 141
- Cryptosporidial diarrhea, 18–19
- Cryptosporidia muris*, 141
- Cryptosporidia parvum*, 140t  
 geographic occurrence of, 140  
 oocysts of, 142f  
 reservoir for, 141
- Cryptosporidiosis  
 in animals, 142–143  
 clinical presentation of, 143t  
 diagnosis of, 143  
 effects of, 139  
 environmental risk factors for, 142  
 geographic occurrence of, 140  
 hosts, reservoir species, vectors for, 141  
 in human beings, 142  
 risk groups for, 140–141  
 site for, 140  
 in small intestine, 140f  
 transmission/life cycle of, 141–142, 141f  
 treatment of, 143, 143t
- Cryptosporidium*  
 animal exposure to, implications of, 378t  
 oocysts of, 141  
 presentation/management of, 336t  
 species of, 140  
 types of, 140t
- Cryptosporidium* cyst, 142
- Ctenocephalides canis*, 149
- Ctenocephalides felis*, 149
- Culex* mosquito, 296, 296f
- Cultural festival, animal contact and, 302
- Cutaneous acariasis, 254
- Cutaneous anthrax  
 in child, 115f  
 clinical presentation of, 116t  
 example of, 23f  
 life cycle of, 115–116  
 transmission of, 114  
 treatment of, 118t
- Cutaneous larva migrans, 174  
 from beaches, 304
- Cutaneous leishmaniasis  
 cause of, 187  
 diagnosis of, 190–191  
 environmental risk factors for, 187–188  
 geographic occurrence of, 187  
 hosts, reservoir species, vectors for, 187  
 in human beings, 188  
 transmission/life cycle of, 187  
 treatment of, 190t
- Cyanide poisoning, 52
- Cyanobacterial toxin  
 in domestic animals, 101  
 effects of, 101  
 toxicity of, humans versus animals, 99t
- Cylindrospermopsin, HAB-related illness and, 97t
- Cystic echinococcosis, 153  
 cause of, 153
- Cysticercosis  
 life cycle of, 340f  
 overview of, 338
- Cystic hydatid disease, 153
- D**
- Dairy farming, animal workers in, 344
- Dancing cats disease, 51
- Dander, as indoor air contaminant, 38–39
- Death  
 animal abuse causing, 33  
 cause and appropriate action for, 20t  
*Chlamydomophila psittaci* and, 136  
 environmental exposures and, 60t
- Deer-fly fever, 289
- Deerfly fever, 289
- Deer mouse, as Hantavirus carrier, 38f
- DEET, 73  
 application of, 74f  
 guidelines for use, 75b  
 poisoning from  
 in animals, 77  
 in human beings, 77  
 use of, 74t
- Delhi boil, 186
- Depression, pet attachment and, 28
- Dermacentor andersoni*. *See* Rocky Mountain wood tick
- Dermacentor variabilis*. *See* American dog tick
- Dermanyssus gallinae*, 255  
 zoonotic potential of, 255t
- Dermatitis  
 characteristics of, 46  
*Salmonella* and, 252f
- Dermatophytosis, 144
- Dermatophyte  
 acquiring, routes of, 2f  
 classification of, 144  
 transmission/features of, 145t
- Dermatophytosis  
 in animals, 146–147  
 cause of, 144  
 clinical presentation of, 147t  
 crusting and, 22f  
 diagnosis of, 147  
 environmental risk factors for, 145–146, 145f  
 focal alopecia from, 146f  
 fungus causing, 144  
 geographic occurrence of, 144  
 hosts, reservoir species, vectors for, 144–145  
 in human beings, 146  
*Microsporum canis* as cause of, 387f  
 risk groups for, 144  
 signs of, 146f  
 transmission/life cycle of, 145, 145f  
 treatment of, 147–148, 148t
- Desensitization therapy, 46, 47
- Dew itch, 174
- Diarrhea  
 animal shelter guidelines for, 381b  
 cause and appropriate action  
 for human health care provider, 20t  
 for veterinarian, 21t  
 cause and appropriate action for, 20t  
*See also* Giardiasis
- Diffuse cutaneous leishmaniasis, 188
- Difloxacin, bite infection, treatment for, 329t

- Digoxin toxicity, 56
- Dipylidiasis, 148*t*  
 in animals, 152, 152*t*  
 in children, 150–152, 151*f*  
 diagnosis of, 152  
 environmental risk factors for, 152  
 geographic occurrence of, 149  
 hosts, reservoir species for, 150  
 in human beings, 152, 152*t*  
 risk groups for, 149–150  
 transmission/life cycle of, 150–152, 150*f*  
 treatment of, 152, 152*t*
- Dipylidium caninum*  
 characteristics of, 149  
 example of, 149*f*  
 structure and egg packet of, 151*f*
- Dirofilariasis, 108*t*
- Disaster  
 animals after, management of, 380–383  
 health hazards after, 380*b*  
 human-animal medicine and, 379–383
- Discomfort, freedom from, 11*b*
- Disease  
 animals reported in, 110*t*  
 animal symptoms/human relevance, 19  
 freedom from, 11*b*  
 human symptoms/animal relevance, 19–23  
 OIE, reporting to, 373, 375*b*  
 outbreak of, 341, 376–378  
 with zoonotic potential, 108*t*  
*See also* Zoonotic disease
- Disease ecology, 6
- Disease prevention, handwashing for, 316*f*
- Disease surveillance, 6  
 as active/passive, 374–376  
 information flow, human/animal disease, 373–376, 377*f*
- Disinfectant/cleaners  
 animal workers and, control strategies for, 346*t*  
 use of, in veterinary practice, 360*t*
- Distal radius, lead in, 67*f*
- Distemper, canine, 107*t*
- Distress, freedom from, 11*b*
- Dog  
 allergy to, 43–44  
 bite infection, treatment for, 329*t*  
 botulism in, 335  
 brucellosis in, 126  
 carboxyhemoglobin and, 64  
 cryptosporidiosis in, 142–143  
*Escherichia coli* infection in, 166, 166*t*  
 with rabies, 233*f*, 234*f*  
 risk assessment for, 390*f*  
 with scabies, 258*f*  
 toad poisoning and, 88  
 toxicant exposure and  
   indoors, 52  
   outdoors, 52  
 toxic exposures in, 58*t*  
 tularemia in, 292, 293*t*  
 West Nile virus in, 297*t*, 297–298  
*See also* *Toxocara* infection
- Dog bite  
 dog quarantine after, 379*t*  
 epidemiologic characteristics of, 323*t*  
 infection risk from, 325
- Dog cestodiasis, 149
- Dog tapeworm. *See* Dipylidiasis
- Dog tick, 159–160  
 Rocky Mountain spotted fever and, 237–238  
 sizes of, 199*f*
- Dog-walking program, 26–27  
 for exercise/stress reduction, 39*f*
- Doherty, Peter C., 5
- Dolphin  
 HAB-related death of, 101  
 HAB-related illness in, 99*t*
- Domestic animal. *See* Companion animal
- Domestic violence  
 pets as indicators of, 33–34  
 warning signs of, 34*b*
- Domoic acid  
 effects of, 95*t*  
 toxicity of, humans versus animals, 99*t*
- Dobrava-Belgrade virus, 172
- Doxycycline  
 bite infection, treatment for, 329*t*  
 for *Chlamydomydia psittaci* infection, 138, 138*t*  
 for leptospirosis, 194  
 Q fever and, 225  
 for Rocky Mountain spotted fever, 241, 241*t*  
 for tularemia, 293*t*
- Dryness, winter discomfort and, 41
- Duck  
 avian vacuolar myelinopathy in, 99–100  
 HAB-related illness in, 99*t*  
*Salmonella* and, 316
- Dumb rabies, 231
- dog with, 234*f*
- Dust  
 as indoor air contaminant, 39*t*  
 organic  
   animal workers and, 348  
   farm animal workers and, 367
- E**
- Eagle  
 avian vacuolar myelinopathy in, 99–100  
 HAB-related illness in, 99*t*
- Eastern diamondback rattlesnake, horse bitten by, 84*f*
- Eastern Equine encephalitis (EEE), 294
- Ebola virus infection, first case of, 345–347
- Echinococciasis, 153
- Echinococcosis  
 cause of, 153  
 clinical presentation of, 155*t*  
 diagnosis of, 156  
*Echinococcus multilocularis* as cause of, 154–156  
 in human beings, 154–156  
 risk groups for, 153–154  
 transmission/life cycle of, 154  
 treatment of, 156–157, 157*t*
- Echinococcus granulosus*, 153  
 echinococcosis from, 154  
 example of, 154*f*  
 geographic occurrence of, 153  
 hosts, reservoir species, vectors for, 154  
 hosts for, 153, 156  
 transmission/life cycle of, 155*f*
- Echinococcus multilocularis*  
 alveolar cyst from, 156*f*  
 alveolar echinococcosis and, 153  
 echinococcosis from, 154–156  
 hosts for, 154  
 risk factors for, 154  
 transmission/life cycle of, 154
- Echinococcus oligarthus*  
 geographic occurrence of, 153  
 polycystic hydatid disease and, 156
- Echinococcus vogelii*  
 geographic occurrence of, 153  
 polycystic hydatid disease and, 156
- Echinodermata (Sea urchin), 88–90, 89*t*
- Ecthyma contagiosum, 215
- Ectothrix infection, *Microsporum canis* as cause of, 387*f*
- Eczema/dermatitis  
 characteristics of, 46  
 on hand, 46*f*
- Ehrlichia canis*, 159–160
- Ehrlichia chaffeensis*, 157–158  
 effects of, 159  
 geographic occurrence of, 159  
 transmission/life cycle of, 159–160, 160*f*
- Ehrlichia ewingii*, 157–158  
 effects of, 159  
 hosts, reservoir species, vectors for, 159–160
- Ehrlichiosis  
 in animals, 161  
 cause of, 157–159  
 clinical presentation of, 162*t*  
 diagnosis of  
   in animals, 162  
   in human beings, 161–162  
 environmental risk factors for, 160–161  
 geographic occurrence of, 159  
 hosts, reservoir species, vectors for, 159–160  
 in human beings, 161  
 risk groups for, 159  
 transmission/life cycle of, 160, 160*f*  
 treatment of, 162–163, 163*t*  
   in animals, 163  
   in human beings, 162–163
- Ehrlichiosis ewingii, 157
- Elapidae, 84  
 Australian pressure-immobilization technique for, 87*f*  
 envenomation from, 89*t*  
 symptoms and treatment of, 85*t*
- Elephant, examination of, 365*f*
- Emergency Prevention System for Transboundary Animals and Plant Pests and Diseases (EMPRES), 377–378
- Encephalitis  
 rabies causing, 227  
 toxoplasmosis and, 268
- Encephalopathy, lead exposure and, 68
- Endocrine disruption, 60
- Endotoxin  
 animal workers and, 348  
 farm animal worker and, 367
- Enrofloxacin, 285  
 bite infection, treatment for, 329*t*  
 for tularemia, 293*t*
- Enteritis, treatment for, 253
- Enterobacteriaceae family, 249
- Enterohemorrhagic *E. coli* (EHEC), 164  
 diagnosis of, 166  
 geographic occurrence of, 164–165  
 hosts, reservoir species, vectors for, 165  
 in human beings, 165–166  
 serotype of, 164  
 treatment of, 166
- Enteroinvasive *E. coli* (EIEC), 164
- Enteropathogenic *E. coli*, 164
- Enterotoxigenic *E. coli* (ETEC), 164  
 micrograph of, 165*f*  
 presentation/management of, 336*t*
- Envenomation  
 from hymenoptera, 80  
 marine, 88–91  
 from reptile, 82–84  
 risk factors for, 79–80  
 from scorpion, 82  
 from spider bite, 81  
 travel and, animal contact during, 302  
 types, symptoms, treatment for, 85*t*
- Environment  
 health community and, 38  
 healthy backyard/neighborhood, 390  
 healthy home, 389–390  
 indoor, 38–42  
*See also* Built environment
- Environmental disaster, effects of, 1–3
- Environmental hazard, animal disease/illness and, 18–19, 37
- Environmental health  
 animal, human and, 2*f*  
 benefits of, 11

- importance of, 1–3  
 Environmental mycobacteria (EM), 277  
 Environmental sentinel event, potential, 19–23  
 Environmental toxic exposure  
   cancer and, 59–60, 60*t*  
   lead as, 66–67  
   nontumor disorders from, 60, 60*t*  
 Enzootic hepatitis, 242  
 Epidemic Intelligence Service (EIS) training, 4  
*Epidermophyton*, 144  
 Epigenetics, Human Genome Project and, 6  
 Epinephrine level, animal interaction and, 26  
 EpiPen, 80, 80*f*  
 Epizootic abortion, 123  
 Epsilon toxin, animal exposure to, implications of, 378*t*  
 Equine anaplasmosis, 157  
 Equine chronic obstructive pulmonary disease, 49  
 Equine-derived antivenin, for spider bite, 81–82  
 Equine encephalitis, victim of, 377*f*  
 Equine influenza, 182–183  
 Equine monocytic ehrlichiosis, 157  
 Erysipeloid, 108*t*  
   zoo/aquarium worker and, 364  
*Erysipelothrix rhusiopathiae*, 364  
   animal husbandry and, 367*t*  
 Erythematous wheal, in cat, 48*f*  
 Eschar, cause and appropriate action, 21*t*  
*Escherichia coli*  
   micrograph of, 165*f*  
   presentation/management of, 336*t*  
   reporting of, 341  
   ruminants and, 316  
   serogroup classification for, 164  
   strains of, 164  
*Escherichia coli* infection, 163*t*  
   in animals, 166  
   clinical presentation of, 166*t*  
   complications from, 166  
   diagnosis of, 166  
   environmental risk factors for, 165, 165*f*  
   geographic occurrence of, 164–165  
   hosts, reservoir species, vectors for, 165  
   in human beings, 165–166  
   risk groups for, 165  
   transmission/life cycle of, 165, 165*f*  
   treatment of, 166  
 Espundia, 186  
 Ethambutol (EMB), 284–285, 284*t*  
 Ethanol, toxicity in animals, 53*t*  
 Ethical issues, professionalism and, 10  
 Ethical principles  
   in animal health, 11  
   in human health, 10–11  
 Ethylene glycol (EG)  
   acute toxic exposure to, 55  
   toxic exposure of, 58*t*  
 Eucalyptus, oil of lemon, 73, 74*t*  
 Euthanasia, animal shelter guidelines for, 381*b*  
 Excoriation  
   cause and appropriate action  
   for veterinarian, 21*t*  
 Exhaust  
   as indoor air contaminant, 39*t*  
 Exotic animal  
   infections linked to, 310–311  
   risks associated with, 309–310  
 Exotic pet, 1  
   malpractice liability and, 9  
 Exotic ungulate encephalopathy, 271  
   clinical presentation of, 275*t*  
 Extensively drug-resistant tuberculosis (XDR-TB), 284–285  
 External parasitism, animal shelter guidelines for, 381*b*  
 Extracorporeal membrane oxygenation, 174  
 Extraintestinal pathogenic *E. coli* (ExPEC), 164  
 Extrinsic allergic alveolitis, 45
- F**  
 Falling  
   animal workers and  
   control strategies for, 346*t*  
 Farm  
   foodborne illness risk and, 333–334  
   healthy, 390  
   checklist for, 392*f*  
   inspection and regulation of, 379*t*  
 Farm animal worker  
   allergens and, 367  
   chemical hazards and, 367–368  
   endotoxins/organic dust and, 367  
   occupational health/safety of, 366–367  
   occupational medicine services for, 368  
   injury, exposure, illness management for, 368  
   preplacement screening of, 368  
   vaccinations and, 368  
   physical hazards and, 368  
   psychosocial stressors and, 368  
   zoonotic disease and, 367  
 Farm environment  
   foodborne illness risk and, 332*t*  
 Farmer's lung, 45  
 Farm visits, animal contact and, 302  
 Fat, toxicology testing and, 59*t*  
 Fatal familial insomnia (FFI), 271  
 Fatal human encephalitis, 227  
 Fatigue, cause and appropriate action  
   for human health care provider, 20*t*  
   for veterinarian, 21*t*  
 Fatty food, toxicity in animals, 53*t*  
 Fear, freedom from, 11*b*  
 Federal Emergency Management Agency (FEMA),  
   Pets Act, The, 379  
 Feed, toxicology testing and, 59*t*  
 Feline asthma, 47–48  
 Feline atopy, 48*f*  
 Feline cowpox, 108*t*  
 Feline immunodeficiency virus infection (feline AIDS), 107*t*  
 Feline leukemia virus infection, 107*t*  
 Feline spongiform encephalopathy (FSE), 271  
   clinical presentation of, 275*t*  
   geographic occurrence of, 272  
   host for, 272  
   signs and symptoms of, 273  
   transmission/life cycle of, 272  
 Festival, animal contact and, 302  
 Fetal loss, cause and appropriate action for, 20*t*  
 Fever, cause and appropriate action, 21*t*  
 Fiber, as indoor air contaminant, 39*t*  
 Fiddleback spider. *See* Brown recluse spider  
 Fiduciary duty, 10  
 Filovirus infection, animal exposure to, implications of, 378*t*  
 Fipronil  
   toxicity of, 73–76  
   use of, 75*t*  
 “First Strike” campaign, 33–34  
 Fish  
   brevetoxins killing, 94  
   marine HABs and, 101  
   seabird deaths from, 101  
 Fish envenomation, 90, 90*f*  
 Fish tank, types of, 318*f*  
 Fistulous withers, 126  
 Flame-retardant polybrominated diphenyl ether (PBDE), 60, 60*t*  
 Flavivirus  
   animal exposure to, implications of, 378*t*  
   West Nile virus and, 295–296  
 Flea, 74*f*  
   dog tapeworm and, 149  
   as plague vector, 219  
   types of, 149  
 Flea bite, 23*f*
- Florida red tide, 94*b*  
   effects of, 101  
 Flu, 177  
 Fluorosis, 60*t*  
 Food  
   animal as, 1  
   toxicity in animals, 53*t*  
 Food and Agriculture Organizations (FAO), 5  
 Food and Drug Administration (FDA), equine-derived antivenin from, 81–82  
 Foodborne Diseases Active Surveillance Network,  
   role of, 331  
 Foodborne Diseases Outbreak Response and  
   Surveillance Team, role of, 341  
 Foodborne illness  
   animal exposure to, implications of, 378*t*  
   in animals  
     laboratory test, 341  
     physical examination, 341  
   cases of, 331  
   in human beings  
     laboratory test, 339–340  
     patient history, 339  
     physical examination, 339  
   presentation/management of, 336*t*  
   reporting of, 341  
   treatment for, 341  
   types of, 335–339  
 Food chain, risks along, 332–335, 332*t*  
 Food poisoning  
   clostridial, 335  
   staphylococcal, 335–338  
 Food processing facility, inspection and regulation of, 379*t*  
 Food safety, in home, 333*b*  
 Formaldehyde, as indoor air contaminant, 39*t*  
 Four corners' disease, 171  
 Fowl pest, 177  
 Fowl plague, 177  
 Francis disease, 289  
 Francisella, animal husbandry and, 367*t*  
*Francisella tularensis*  
   effects of, 289  
   subspecies of, 290  
*Francisella tularensis holarctica* (Jellison type B), 290  
*Francisella tularensis mediasiatica*, 290  
*Francisella tularensis tularensis* (Jellison type A), 290  
 Freedom, five, of animal welfare, 11*b*  
 Fungi. *See* Pathogenic fungi  
 Fungus  
   classification of, 144  
   dermatophytosis and, 144  
 Funnel-web spider, neurotoxic envenomation from, 82  
 Furious rabies, 231
- G**  
 Gambian-pouched rat  
   monkeypox and, 310  
   view of, 310*f*  
 Garlic, toxicity in animals, 53*t*  
 Gastric ulcer, from NSAID use, 55*f*  
 Gastroenteritis, 251  
 Gastrointestinal anthrax  
   clinical presentation of, 116*t*  
   life cycle of, 116  
   treatment of, 118*t*  
 Gastrointestinal system  
   contents of, toxicology testing and, 59*t*  
   lead exposure and, 68  
 Generalized alopecia, 48*f*  
 Genome, 6  
 Gentamicin, for tularemia, 293*t*  
 Geophilic dermatophyte  
   classification of, 145*t*  
   transmission of, 144

- GeoSentinel Surveillance Network  
*Bartonella* infection and, 300  
 dog bites and, 300
- Gerstmann-Sträussler-Scheinker disease (GSS), 271
- Giardia*  
 example of, 168f  
 presentation/management of, 336t  
 site and forms of, 168
- Giardia*, in visitation dogs, 31–32
- Giardia* cyst  
 diagnosis of, 170  
 example of, 168f
- Giardia duodenalis*, 167
- Giardia intestinalis*, 167  
 geographic occurrence of, 168  
 in human beings, 168  
*See also* Giardiasis
- Giardia lamblia*, 167  
 in reptile, 170f
- Giardiasis  
 in animals, 170  
 clinical presentation of, 170t  
 diagnosis of, 170  
 environmental risk factors for, 170  
 geographic occurrence of, 168  
 hosts, reservoir species, vectors for, 168  
 in human beings, 170  
 infectious diarrhea and, 167  
 transmission/life cycle of, 168–170, 169f  
 treatment of, 170–171, 171t  
*See also* *Giardia intestinalis*
- Gila monster (*Heloderma suspectum*), 84, 87f
- Glanders, 108t  
 animal exposure to, implications of, 378t
- Glandular tularemia, 292
- Global Avian Influenza Network for Surveillance (GAINS), 377–378
- Glycol, animal exposure frequency, 54t
- Gnathostomiasis, 303
- Goat  
 anaplasmosis in, 161f  
*Chlamydiae* infection in, 137t  
*Chlamydophila abortus* and, 136  
*See also* Orf virus
- Granulomatous conjunctivitis, 121
- Granulomatous enteritis, in cow/cattle, 287f
- Grapes, toxicity in animals, 53t
- Gravid proglottid, 150–152
- Green Building Council, U.S., LEED rating system, 40
- “Green” chemistry, 51
- Green iguana, 309f
- Ground itch, 174
- Guillain-Barré syndrome, 298
- Guinea pig, sarcoptic mange in, 258f
- H**
- H (flagellar) antigen, 164
- H5N1. *See* Avian influenza
- Habitat destruction, species diversity and, 37–38
- HAB-related illness  
 causative agents of, 94–99  
 cyanobacteria associated with, 97t  
 detection, surveillance, education for, 93–94  
 diagnosis of, 102  
 eutrophication, prevention of, 94  
 management of, 102–103  
 prevention of, 93  
 reporting of, 94  
 treatment of  
   in animals, 103  
   in human beings, 102–103  
*See also* Harmful algal bloom
- Hair, toxicology testing and, 59t
- Halogen, 360t
- Hamster  
 lymphochoriomeningitis virus and, 317  
 view of, 317f
- Hand eczema, 46
- Handwashing, for disease prevention, 316f
- Hantavirus  
 deer mouse as carrier of, 38f  
 rodents and, 172
- Hantavirus infection  
 animal exposure to, implications of, 378t  
 in animals, 174  
 diagnosis of, 174  
 environmental risk factors for, 173  
 geographic occurrence of, 172  
 hosts, reservoir species, vectors for, 172–173  
 in human beings, 173  
 risk groups for, 172  
 syndromes of, 171  
 transmission/life cycle of, 173, 173f  
 travel and, 303  
 treatment of, 174
- Hantavirus pulmonary syndrome (HPS), 171  
 geographic occurrence of, 172  
 in human beings, 173  
 prevention of, 172b
- Haplorhina pumilio*, 303
- Harmful algal bloom  
 effects of, 91  
 exposure to  
   metabolism and routes of, 99–100  
   risk groups for, 100  
   sites of, 92, 100f  
   toxicity of, 95t  
   in animals, 101–102  
   in human beings, 100–101  
   humans versus animals, 99t  
   types by site of, 100f  
*See also* HAB-related illness
- Harmful Algal Bloom Incidence Surveillance System (HABISS), 94
- Harvest/processing  
 foodborne illness risk and, 332t
- Harvest/processing, foodborne illness risk and, 334
- Haverhill fever (Rat bite fever), 108t
- Hay, moldy, 45
- cattle and, 49
- Hazard  
 animal research facility worker and, 362–364  
 animal workers and, 345  
 biological  
   allergens as, 345, 354  
   zoonotic pathogens as, 345–347  
 chemical, 348–349  
 control strategies for, 346t, 349t  
 elimination of, 349  
 OSHA Hazards Communication Standards, 353–354  
 in pet store setting, 366  
 physical, 349  
 psychosocial, 349  
*See also* Animal research facility worker; Farm animal worker; Pet store worker; Veterinary personnel; Wildlife rehabilitator; Zoo/aquarium worker
- Hazard card, for animal workers, 353f
- Health community, building, 38
- Health department, human-animal health, coordination of care, 388–389
- Health hazard, built environment and, 39t
- Health history  
 approach to, 12–17  
 baseline checklist for, 14f  
*See also* Medical history
- Health home environment, 389–390
- Health Insurance Portability and Accountability Act (HIPAA)  
 animal worker medical records, 353  
 covered entities under, 10  
 purpose of, 10  
 veterinarians and, 10
- Health risk assessment form, animal, 16f
- Healthy backyard/neighborhood, 390  
 checklist for, 392f
- Healthy farm, 390  
 checklist for, 392f
- Healthy home  
 with animals, checklist, 391f  
 concept of, 50
- Heartwater, *Amblyomma* and, 310
- Heartworm, 108t
- Heaves, in horses, 47t, 49
- Helicobacter* infection, 108t
- Heloderma horridum* (Mexican beaded lizard), 84
- Heloderma suspectum* (Gila monster), 84
- Hematochezia, cause and appropriate action, 21t
- Hemolytic uremic syndrome (HUS)  
 as *E. coli* complication, 166  
 EHEC infection and, 165
- Hemoptysis, cause and appropriate action, 21t
- Hemorrhage, cause and appropriate action for, 20t
- Hemorrhagic fever  
 bushmeat and, 303–304  
 Rift Valley fever and, 246  
 travel and, 303
- Hemorrhagic fever with nephropathy, 171  
 cause of, 172  
 stages of, 173–174
- Hepatitis A infection, reporting of, 341
- Hepatitis E virus, animal husbandry and, 367t
- Herpes B infection  
 animal research facility worker and, 362  
 fatal viral meningitis and, 328  
 Old World monkeys and, 300  
 in rhesus monkey, 328f
- Highly Pathogenic Avian Influenza Early Detection Data System (HEDDS), 377–378
- High pathogenicity avian influenza, 182
- Hilar lymphadenopathy, 282–283
- Histoplasma*, animal husbandry and, 367t
- Histoplasma capsulatum*, animal workers and, 348
- Histoplasmosis, 2f
- Hives, animal allergy and, 46
- HIV. *See* Human immunodeficiency virus (HIV)
- Home, as healthy environment, 389–390
- Honeybee, 80
- Hookworm dermatitis, 176
- Hookworm infection  
 in animals, 176  
 from beaches, 304  
 clinical presentation of, 176t  
 diagnosis of, 176–177  
 effects of, 174–175  
 environmental risk factors for, 176f  
 geographic occurrence of, 175  
 hosts, reservoir species, vectors for, 175  
 in human beings, 175  
 life cycle of, 176f  
 risk groups for, 175  
 species of, 175  
 transmission/life cycle of, 175  
 treatment of, 177t  
   in animals, 177  
   in human beings, 177  
*See also* *Toxocara* infection
- Hookworm ova, 176f
- Horse  
 brucellosis in, 126  
 dermatophytosis in, 146–147, 146f  
 equine encephalitis, 377f  
 fistulous withers in, 126f  
 heaves in, 47t, 49  
 lead toxicity in, 68, 69t  
 leishmaniasis in, 190f  
 sarcoptic mange in, 258  
 tularemia in, 292, 293t  
 West Nile virus in, 297t
- Household cleaner, 58t



- House mouse (*M. musculus*). *See* Lymphocytic choriomeningitis (LCM)
- Human-animal bonding, 13  
immunocompromised individual and, 313
- Human-animal bond phenomenon, 1
- Human-animal contact, in veterinary history, 13–17
- Human-animal disease risk form, 17*f*
- Human-animal interaction (HAI)  
child with dog, 25*f*  
facilitation of, 29–32  
*Giardia* infection and, 167  
health benefits of, 25–29  
in older adults, 25–26  
long term versus casual encounter, 26  
in occupational setting, 343  
pain level and, 26  
physiological benefits of, 26  
psychological benefits of, 26*t*  
psychosocial/therapeutic aspects of, 24–36, 27*t*  
research needs for, 34  
types of, 24–25
- Human-animal medicine  
case scenario, shared behavior risk, 388  
collaboration for, 5  
communication for, 4–5  
medical provider to veterinarian, 387*b*  
coordination of care, 388–389  
disasters and, 379–383  
legal/ethical issues in, 7–11  
malpractice liability and, 8–9  
One Health approach to, 384  
professionals involved in, 4  
public health and, 381  
tickborne disease, shared environment exposure, 389  
*See also* Veterinary-human medical partnerships
- Human being  
animal bite in, 322–327  
anthrax in  
clinical presentation of, 116*t*  
diagnosis of, 116–117  
treatment of, 118  
types of, 115–116  
brucellosis in, 126  
*Campylobacter* disease in, 130–131  
carbon monoxide poisoning in, 63–64  
cat-scratch disease in, 121  
*Chlamydiae* infection in, 137*t*  
*Chlamydomydia psittaci* in, 135–136  
cryptosporidiosis in, 142  
disease outbreak in, 376  
ehrlichiosis/anaplasmosis in, 161  
*Escherichia coli* infection in, 165–166  
foodborne illness, evaluation of, 339–340  
*Giardia intestinalis* in, 168  
giardiasis in, 170  
HAB-related illness in, 99*t*  
Hantavirus infection in, 173  
hookworm infections in, 175  
influenza in, 182  
insect repellent for, 73  
LCM infection in, 207–208  
lead toxicity in, 68  
leishmaniasis in, 188  
leptospirosis in, 193–194  
Lyme disease in, 201  
marine envenomation in, 89*t*  
medication toxicity in, 54–55  
MRSA in, 212  
orf virus in, 216  
pesticide toxicity in, 76–77  
plague in, 220  
preventive environmental risk assessment for, 389–390  
prion disease in, 273  
Q fever in, 225  
rabies in, 230–231  
Rift Valley fever in, 246  
Rocky Mountain spotted fever in, 239–240  
*Salmonella* in, 251  
scabies and, 257  
toxic exposures in, 58*t*  
*Toxocara* infection in, 263  
toxoplasmosis in, 268  
transmissible spongiform encephalopathy in, 273  
tuberculosis in, 276, 279–281  
tularemia in, 291–292, 293*t*  
West Nile virus in, 296, 297*t*
- Human bite, 325
- Human dander, as indoor air contaminant, 38–39
- Human disease symptoms  
animal health and, 22*f*  
cause and appropriate action for, 20*t*  
relevance to, 19–23  
types of, 19–23
- Humane Genome Project, 6
- Humane Society of the United States, “First Strike” campaign, 33–34
- Human granulocytic anaplasmosis (HGA), 157  
peripheral blood smear showing, 163*f*
- Human health  
animal disease/illness and, 18–19  
consequences of, 18–19  
animal health and, 1  
convergence of, 7–8  
baseline history for veterinarian, 13–15  
companion animals and, 13  
echinococcosis in, 154–156  
environmental, animal and, 2*f*  
ethical principles in, 10–11  
training/practice statistics for, 3–4, 3*t*  
veterinarian role in, 3–4
- Human health clinician  
disease reporting/notification by, 10  
human-animal medicine, key points for, 7  
veterinarian, referral to, 385–387
- Human health risk  
human-animal disease risk survey for, 17*f*  
screening/follow-up questions for, 17*t*  
travel and, animal contact during injuries and, 300–305  
prevention of, 301*t*
- Human immunodeficiency virus (HIV)  
animal research facility worker and, 363  
infection, prevention of, 319*t*  
nontuberculosis mycobacteria and, 287  
tuberculosis and, 279–280  
zoonotic disease and, 318
- Human monocytic ehrlichiosis (HME), 157
- Human toxic exposure, sentinels for, 51–52
- Humidity, effects of, 41
- Hunger, freedom from, 11*b*
- Hurricane Katrina, effects of, 1–3
- Hydatid cyst, 153  
CT image of, 156*f*  
in horse liver, 156*f*
- Hydatid disease, 153
- Hydatidosis, 153
- Hydatid sand, 153*f*
- Hydrocephalus, congenital toxoplasmosis and, 269*f*
- Hydrozoa, 88, 89*t*
- Hygeia, bust of, 373*f*
- Hymenopteran envenomation, 80  
symptoms and treatment of, 85*t*
- Hyperkeratosis, *Sarcoptes scabiei* and, 256*f*
- Hyperkeratotic scabies, occurrence of, 257
- Hypersensitivity pneumonitis (HP), 45–46  
in cattle, 47*t*, 49  
chest radiograph of, 45*f*  
diagnosis of, 45  
symptoms of, 45  
treatment of, 45–46  
in veterinary personnel, 354
- Hyperthyroidism, environmental exposures and, 60*t*
- Hypochlorite, 360*t*
- ## I
- Iatrogenic Creutzfeldt-Jakob disease (CJD),  
transmission of, 272–273
- IFA visualization, cryptosporidiosis and, 143
- IFN- $\gamma$ -releasing assay (IGRA), 284
- Iguana  
green, 309*f*  
lead poisoning in, 69*f*
- Imidacloprid  
toxicity of, 76  
use of, 75*t*
- Immunocompromise, etiology of, 314*t*
- Immunocompromised individual  
animal bite and, 325  
animal husbandry and, 317–318  
care for pet of, 318  
human-animal bonding and, 313  
occupational/recreational risk and, 316  
pet ownership and, 315  
pet selection for, 316–317  
reptiles and, 317*f*  
veterinarian role in care of, 318–320  
zoonotic disease prevention for, 315–318
- Immunocompromised pet  
animal bites in, 328, 329*t*  
veterinarian role in care of, 318–320
- Immunodeficiency, animal-human disease transmission and, 315
- Immunodeficient animal  
care for, 318  
guidance for owner, 318–320
- Immunoglobulin E, anaphylaxis and, 45
- Immunosuppression, etiology of, 314–315
- Importing, of animal, 308–309
- Inadequate ventilation, 39–40  
sentinel events from, 41*t*
- Indoor air quality  
clinical conditions related to, 40  
definition of, 37  
illness associated with, checklist for, 40*b*  
improvement of, 42*b*  
LEED rating system and, 40  
problems in  
conditions associated with, 41*t*  
evaluation of, 40–42
- Indoor environment, 38–42  
contaminants in, 39*t*
- Industrial hygienist, 345
- Infection control/biosafety specialist, 345
- Infection control plan for veterinary practice, model for, 355*f*
- Infectious canine cyclic thrombocytopenia, 157
- Infectious diarrhea. *See* Giardiasis
- Infectious disease  
animal research facility worker exposure to, 364  
animal worker exposure to, 351–353  
environmental driver versus outcome, 106*f*  
exotic/ wildlife pets and, 310–311  
farm animal worker exposure to, 368  
nationally notifiable, 374*b*  
nontraditional pets and  
prevention guidelines for, 312*b*  
risk groups for, 310*t*  
as non-zoonotic, 106–107, 107*t*  
outbreak of, 376–378  
pet store worker exposure to, 366  
scenarios for, 299–330  
shared risk of, us versus them, 105–106  
traveling pet and, 305  
travel medicine and, 299–300  
veterinary personnel exposure to, 362  
zoo/aquarium worker exposure to, 366  
as zoonotic, 1, 105

- Influenza  
 animal husbandry and, 367*t*  
 bacterial pneumonia and, 177, 181*f*  
 clinical presentation of, 183*t*  
 diagnosis of  
   in animals, 184  
   in human beings, 184  
 effects of, 177  
 environmental risk factors for, 182  
 evolution of, 180  
 hosts, reservoir species, vectors for, 181  
 in human beings, 182  
 micrograph of, 180*f*  
 risk groups for, 181  
 species affected by, 178  
 transmission/life cycle of, 181–182, 182*f*  
 treatment of  
   in animals, 184–185  
   in human beings, 184, 185*t*  
 types of, 180  
 vaccination for, 179
- Influenza A virus  
 diagnosis of, 184  
 schematic model of, 178*f*  
 subtypes of, 180
- Influenza A virus H3N8/H7N7, 182–183
- Influenza B, 180
- Influenza C, 180
- Influenza pandemic, 177–178  
 types and duration of, 180*f*
- Inhalational anthrax  
 chest x-ray of, 117*f*  
 clinical presentation of, 116*t*  
 life cycle of, 116  
 screening guidelines for, 117*f*  
 treatment of, 118*t*
- Inhalational tularemia, 293*t*
- Injury  
 animal abuse causing, 33  
 animal research facility worker and, 364  
 animal workers and  
   control strategies for, 346*t*  
   management of, 351–353  
 farm animal worker and, 368  
 freedom from, 11*b*  
 pet store worker and, 366  
 veterinary personnel and, 362  
 zoo/aquarium worker and, 366
- Insect repellent  
 for human beings, 73  
 types of, 74*t*  
*See also* Pesticide
- Insect sting  
 anaphylaxis from, 80  
 angioedema from, 80*f*
- International animal trade, 310–311
- International travel. *See* Travel
- Intestinal parasitism, animal shelter guidelines for, 381*b*
- Intestine, lead in, 67*f*
- In vitro carcinogen, 101
- Iodine compound, 360*t*
- Isoniazid (INH), 284–285, 284*t*
- Itching, animal allergy and, 46
- Ixodes pacificus*, 159  
 Lyme disease and, 198
- Ixodes scapularis*, 159  
 host for, 198  
 Lyme disease and, 198  
 size of, 199*f*  
 view of, 198*f*
- Ixodid ticks, Rocky Mountain spotted fever and, 237–238
- J**
- Jellyfish  
 groupings of, 88
- larvae from, 88  
 venom of, 88
- Jellyfish envenomation, 88
- Jiggers (*Tunga penetrans*), 304
- Johne's disease  
 cause of, 287  
 in cow/cattle, 287*f*
- Justice  
 application of, 11*b*  
 definition of, 10–11
- K**
- Kala-azar, 186
- Karenia brevis*, 94
- Kennel, animal workers at, 344
- Kennel cough, 108*t*
- Keratinophilic mycosis, 144
- Kidney  
 lead exposure and, 68  
 toxicology testing and, 59*t*
- Kilborne, F. L., 5
- Kuru, 271
- Kyphosis, 281*f*
- L**
- Laboratory testing, for foodborne illness  
 in animals, 341  
 in human beings, 339–340
- Labored breathing, cause and appropriate action  
 for human health care provider, 20*t*  
 for veterinarian, 21*t*
- La Crosse encephalitis (LAC), 294
- Lamblia intestinalis*, 167
- Larvae (sea bather's eruption), 88
- Lassa fever, travel and, 303
- Latent tuberculosis  
 diagnosis of, 283–284  
 treatment of, 285
- Latex allergy, animal worker and, 349–350
- $\alpha$ -Latroxin, 81
- Lead  
 characteristics of, 65*f*  
 in distal radius, 67*f*  
 exposure to  
   metabolism and routes of, 67–68  
   sources of, 66–67  
 in intestines, 67*f*  
 public health communication about, 389*b*  
 risk groups for, 68  
 shared environment exposure to, 388–389  
 toxicity of  
   in animals, 68–70, 69*t*  
   chelation therapy guidelines, 71*t*  
   in human beings, 68, 69*t*  
   treatment and level of, 70*t*  
*See also* Lead poisoning
- Leading, service dogs and, 25
- Lead lines, 66–67, 67*f*
- Lead poisoning  
 blood lead level, 70*t*  
 diagnosis of, 70  
 presentation/management of, 336*t*  
 treatment of  
   for animals, 71  
   for human beings, 70–71  
*See also* Lead
- LEED rating system, 40
- Leek, toxicity in animals, 53*t*
- Leishmania*, 186
- Leishmaniasis  
 in animals, 189–190  
 in canine, 189*f*  
 diagnosis of, 190–191  
 environmental risk factors for, 187–188  
 forms of, 186  
 geographic occurrence of, 187
- hosts, reservoir species, vectors for, 187  
 in human beings, 188  
 risk groups for, 187  
 transmission/life cycle of, 187, 188*f*  
 traveling pet and, 305  
 treatment of, 190*t*, 191  
 ulcer from, 190*f*
- Leishmaniasis recidivans, 188
- Lemon eucalyptus, oil of, 73, 74*t*
- Leopard/spurred tortoise, heartwater and, 310
- Lepidopterism, 80–81
- Leprosy, 276  
*Mycobacterium leprae* and, 288
- Leptospira*, 192
- Leptospira interrogans*, 192*f*
- Leptospirosis  
 acquiring, routes of, 2*f*  
 in animals, 194  
 cause of, 192  
 clinical presentation of, 193*t*  
 diagnosis of, 194  
 doxycycline and, 194  
 environmental risk factors for, 193  
 geographic occurrence of, 192  
 hosts, reservoir species, vectors for, 192–193  
 in human beings, 193–194  
 phases of, 194*f*  
 prevalence of, 191  
 risk groups for, 192  
 transmission/life cycle of, 193, 193*f*  
 treatment of, 194–195, 195*t*
- Letter  
 animal sentinel event, environmental toxic risk, 388*b*  
 dog obesity, 388*b*  
 zoonotic disease counseling/risk reduction, 386*b*
- Liability  
 malpractice, 8–9  
 personal injury and, 9–10  
 workers' compensation, 9
- Listeria*, presentation/management of, 336*t*
- Listeria monocytogenes*, 335
- Listeriosis  
 in cow/cattle, 338*f*  
 overview of, 335
- Litterbox, cleaning, 316, 316*f*
- Live animal market, 302–303  
 Severe acute respiratory syndrome and, 302–303
- Live bird market, H5N1 avian influenza and, 302–303
- Liver, toxicology testing and, 59*t*
- Livestock  
 Rift Valley fever in, 246  
 toxicant exposure and, 52  
 tuberculosis in, 276
- Livestock confinement, animal workers in, 344, 348
- Live vaccine, animal workers and, 345–347  
 control strategies for, 346*t*
- Lizard, poisonous, 84  
 symptoms and treatment of, 85*t*
- "Loaner" dog, 26–27
- Lone star tick, size of, 199*f*
- Long-term care, animal interaction and, 26
- Loss, of pet, impact of, 32–33
- Lower respiratory tract symptoms, cause and appropriate action, 21*t*
- Low pathogenicity avian influenza, 182
- Lufenuron  
 toxicity of, 76  
 use of, 75*t*
- Lunar New Year festival, travel during, 302
- Lung, toxicology testing and, 59*t*
- Lung disease  
 environmental exposures and, 60*t*  
*See also* Tuberculosis
- Lung function test, for animal workers, 350–351

- Lyme arthropathy, 201–202
- Lyme disease
- acquiring, routes of, 2*f*
  - in animals, 201–202
  - antibiotics for, 203, 203*t*
  - cause of, 195–196
  - clinical presentation of, 202*t*
  - diagnosis of
    - in animals, 202
    - in human beings, 202
  - environmental risk factors for, 199–201
  - example of, 22*f*
  - geographic occurrence of, 196–198, 198*f*
  - hosts, reservoir species, vectors for, 198
  - in human beings, 201
  - MRI and, 201*f*
  - risk groups for, 198
  - transmission/life cycle of, 198–199, 200*f*
  - treatment of, 203, 203*t*
- Lyme nephropathy, 201–202
- Lymphatic disease, nontuberculosis mycobacteria and, 287
- Lymph node, cat-scratch disease and, 121*f*
- Lymphochoriomeningitis virus (LCMV), outbreak of, hamster and, 317
- Lymphocytic choriomeningitis (LCM)
- animal research facility worker and, 363
  - in animals, 208
  - Arenaviridae* family and, 205–206
  - clinical presentation of, 208*t*
  - CT of infant with, 207*f*
  - diagnosis of, 208
  - effects of, 204
  - environmental risk factors for, 207
  - geographic occurrence of, 206
  - hosts, reservoir species, vectors for, 206
  - in human beings, 207–208
  - pregnancy and, 328
  - risk groups for, 206
  - transmission/life cycle of, 206–207, 206*f*
  - treatment of, 208–209
- Lyssavirus, 228
- Lyssavirus, bat as reservoir for, 303
- M**
- Macadamia nut, toxicity in animals, 53*t*
- Mad cow disease, 271
- Malaria, travel and, 303
- Malnutrition, freedom from, 11*b*
- Malpractice liability
- management techniques for, 9
  - for physician/veterinarian, 8–9
- Malta fever, 123
- Manatee, HAB-related death of, 101
- Mannitol, for HAB-related illness, 102–103
- Marbofloxacin, 285
- bite infection, treatment for, 329*t*
- Marburg virus, bats and, 303
- Marine animal, HAB-related death of, 101
- Marine envenomation, 88–91, 89*t*
- Marine HAB, fish and, 101
- Market men's disease, 289
- Material Data Safety Sheet (MSDS), 57
- chemical hazards and, 348
- Measles, animal research facility worker and, 362–363
- Mediastinal lymphadenopathy, 282–283
- Medical chart, baseline information for, 13
- Medical evaluation, for animal workers, 349, 353
- Medical history
- animal health information on, 12–13
  - approach to, 12–17
  - lead exposure risk and, 70*b*
- Medical questionnaire, for animal workers, 350*f*
- Medical record, confidentiality for animal workers, 353
- Medical referral
- case scenario
  - dermatophyte, cat in home, 385–387
  - shared environment toxic risk, 387–388
  - zoonotic disease counseling/risk reduction, 385
- form for, 385*b*
- human health care provider to veterinarian, 385–387
- for preventive risk reduction, 385*b*
  - veterinarian to human health care provider, 387–388
- zoonotic disease counseling/risk reduction, 386*b*
- Medical surveillance
- for animal research facility worker, 364
  - for animal workers, 351
  - for pet store workers, 366
  - for veterinary personnel, 359–362
  - for zoo/aquarium worker, 366
- Medication
- judicious prescription of, 51
  - toxicity of, 54–55, 55*t*
- Mediterranean fever, 123
- Melamine
- effects of, 51
  - presentation/management of, 336*t*
- Melioidosis (pseudoglanders), 108*t*
- Meningeal plague
- clinical presentation of, 221*t*
  - in human beings, 220
- Meningoencephalitis, Rift Valley fever and, 246
- Mental suffering, freedom from, 11*b*
- Mercury poisoning
- environmental exposures and, 60*t*
  - sentinels of, 60
- Mesothelioma, 52
- Metabolism, toxicant exposure and, 52
- Metaflumizone
- toxicity of, 76
  - use of, 75*t*
- Metaldehyde
- acute toxic exposure to, 56
  - toxic exposure of, 58*t*
- p*-methane 3,8-diol (PMD), 73
- Methicillin-resistant coagulase-negative *Staphylococcus* (MRCoNS), 211
- Methicillin-resistant *Staphylococcus aureus* infection
- in animals, 212
  - clinical presentation of, 212*t*
  - diagnosis of, 212
  - effects of, 209–210
  - environmental risk factors for, 211–212
  - geographic occurrence of, 210–211
  - hosts, reservoir species, vectors for, 211
  - in human beings, 212
  - life cycle of, 211*f*
  - micrograph of, 206*f*
  - prevalence of, 210
  - risk groups for, 211
  - transmission of, 211
  - treatment of, 212–213, 212*t*
- β-methylamino-L-alanine (BMAA), 99–100
- Metronidazole, bite infection, treatment for, 329*t*
- Mexican beaded lizard (*Heloderma horridum*), 84
- Microagglutination test (MAT), 194
- Microcystin
- HAB-related illness and, 97*t*
  - as in vitro carcinogen, 101
- Microphytosis, 144
- Microsporium*, 144
- Microsporium audonii*, geographic occurrence of, 144
- Microsporium canis*
- in culture, 148*f*
  - ectothrix infection from, 387*f*
  - geographic occurrence of, 144
  - paronychia in cat from, 387*f*
  - Tinea capitis and, 146, 146*f*
- Microsporium nanum*, 144–145
- Milk pasteurization
- Q fever and, 224
- Minamata disease, 51
- Mine, canaries and, 50
- Mite
- Sarcoptes scabiei* as, 255
  - zoonotic potential of, 255*t*
- Mobility, animal assistance for, 25
- Model Veterinary Practice Act (MVPA), 8
- Mold
- as indoor air contaminant, 38–39
  - water damage and, 41
- Moldy food, toxicity in animals, 53*t*
- Moldy hay, 45
- cattle and, 49
- Monkey, scratch/bite from, 362
- Monkeypox, 108*t*
- example of, 311*f*
  - exotic rodents and, 310–311
  - Gambian pouched rat and, 310–311
  - wildlife importation and, 311*f*
- Monkey temple, 300
- Moon blindness, 191
- Morbidity, swine influenza and, 182
- Mosquito, 74*f*
- abandoned pools and, 380*f*
  - Culex*, 296*f*
  - Rift Valley fever and, 243, 244
  - See also West Nile virus (WNV)
- Mosquito-borne virus, West Nile virus as, 296
- Mosquito repellent, 74*f*
- Mucocutaneous leishmaniasis, 188
- Mud fever, 191
- Multidrug-resistant tuberculosis (MDR-TB), 284–285
- Mushroom
- acute toxic exposure to, 56
  - toxic exposure of, 58*t*
- Mushroom worker's lung, 45
- Mycobacteria
- acid-fast bacilli and, 282
  - classification of, 277
  - geographic occurrence of, 278
  - identification of, 282
- Mycobacteria growth indicator tube, 282
- Mycobacterial interspersed repetitive unit (MIRU), 282
- Mycobacteria other than tuberculosis (MOTT), 277
- Mycobacteria ulcerans*, Buruli ulcer and, 287
- Mycobacteriosis, 276
- Mycobacterium avium*, 288*f*
- Mycobacterium bovis*, 276, 278
- acquiring, routes of, 2*f*
  - radiograph of, 282*f*
- Mycobacterium genavense*, 287
- Mycobacterium leprae*, 288
- Mycobacterium marinum*, 276, 287, 288
- aquarium workers and, 364
- Mycobacterium paratuberculosis*, 287
- Mycobacterium prototuberculosis*, 278
- Mycobacterium tuberculosis*, 276
- Mycobacterium tuberculosis* complex (MTBC), 276
- geographic occurrence of, 278
  - hosts for, 278*t*
  - species and cause of, 277–278
- Mycobacterium tuberculosis* direct test, 282
- Mycoplasma phocicerebrale*, 364–365
- Myiasis, 217
- N**
- Nasal cancer, polyaromatic hydrocarbon and, 52
- Nasal/sinus congestion
- cause and appropriate action
  - for human health care provider, 20*t*
  - for veterinarian, 21*t*
- National Animal Health Policy and Programs, 341
- National Animal Health Reporting System, 341

- National Association of Public Health Veterinarians  
animal workers training and, 351  
infection control plan for veterinary practice,  
model for, 355f  
veterinary standard precautions and, 353–354  
*Veterinary Standard Precautions for Zoonotic  
Disease Prevention in Veterinary Personnel*, 354
- National Asthma Education and Prevention  
Program Expert Panel Report 3, 46–47
- National Center for Zoonotic, Vector-Borne, and  
Enteric Disease (NCZVED), 4
- National Health and Nutrition Examination Survey  
(NHANES), toxoplasmosis and  
geographic occurrence of, 266  
risk groups for, 266
- National Highly Pathogenic Avian Influenza (HPAI),  
179
- Necropsy, autopsy rate versus, 3
- Neglect  
cause and appropriate action for, 20t  
potential for, 13
- Neighborhood, healthy, 390  
checklist for, 392f
- Nematocyst, structure of, 90f
- Neoplasia, 20t
- Neorickettsia sennetsu*, 159
- Neosaxitoxin, HAB-related illness and, 97t
- Nephropathia epidemica*, 172
- Neuropathology, cause and appropriate action for, 20t
- Newcastle disease virus, animal husbandry and, 367t
- New World spotted fever, 236
- Nine-mile fever, 222
- Nipah virus, 105–106  
animal exposure to, implications of, 378t  
animal husbandry and, 367t  
bats and, 303  
first case of, 345–347
- Nitenpyram  
toxicity of, 76  
use of, 75t
- Nitrogen dioxide  
animal workers and, control strategies for, 346t  
source of, 348–349
- N-methyl carbamate  
toxicity of, 76  
*See also* Carbamate
- Nodularin, HAB-related illness and, 97t
- Noise, control strategies for, 346t
- Nonaccidental injury, 33
- Nonallergic asthma, 45
- Nonhealing wound, cause and appropriate action, 20t
- Nonhuman primate, exposure to, 300
- Nonsteroidal antiinflammatory drug (NSAID)  
gastric ulcer from, 55f  
toxicity of, 54–55, 55t
- Nontuberculosis mycobacteria (NTM), 277  
clinical/epidemiological presentation of, 286  
HIV and, 287  
lymphatic disease and, 287  
pulmonary, diagnosis of, 287  
site and symptoms of, 286–287  
skin, soft tissue, bone disease and, 287  
transmission of, 286  
types and presentation of, 287t
- Non-tuberculosis mycobacterial disease, 276
- Non-typhoid *Salmonella* gastroenteritis, 251
- Non-zoonosis, infectious disease as, 106–107, 107t
- North American tick typhus, 236
- Norwegian scabies, 254  
occurrence of, 257
- Nosocomial zoonosis, immunocompromised patient  
and, 315
- Notification, of disease/conditions, 10
- Notodres cati*, 255  
zoonotic potential of, 255t
- Nucleic acid amplification (NAA) test, 282
- Nursing home resident, dog visits and, 26
- O**
- Occupational allergen, types of, 43
- Occupational disease, types of, 353–354
- Occupational exposure, HIV-infected person and,  
319t
- Occupational health approach, 344, 344b
- Occupational health/safety  
for animal research facility worker, 362  
for farm animal worker, 366–367  
for veterinary personnel, 353–362  
for wildlife rehabilitator, 369  
for zoo/aquarium worker, 364  
*See also* Animal worker
- Occupational health team  
industrial hygienist role in, 345  
infection control/biosafety specialist role  
in, 345  
members of, 344, 345f  
of pet store worker, 366  
veterinarian role in, 344–345
- Occupational medicine, 349
- Occupational medicine services  
for animal research facility worker, 363–364  
for animal workers, 352t  
injury, exposure, illness management for,  
351–353  
medical records, confidentiality of, 353  
medical surveillance for, 351  
preplacement screening of, 349–351  
training for, 351  
vaccinations and, 351  
for farm animal worker, 368  
injury, exposure, illness management for, 368  
preplacement screening of, 368  
vaccinations and, 368  
for pet store workers  
injury, exposure, illness management for, 366  
medical surveillance for, 366  
preplacement screening of, 366  
vaccinations and, 366  
for veterinary personnel, 359–362  
injury, exposure, illness management for, 362  
medical surveillance for, 359–362  
preplacement screening of, 359  
for zoo/aquarium worker, 365–366  
injury, exposure, illness management for, 366  
medical surveillance for, 366  
preplacement screening of, 365–366
- Occupational Safety and Health Administration  
(OSHA)  
carbon monoxide exposure, 62–63  
disease/injury reporting to, 10  
Respiratory Standard, 349–350  
workplace plan for hazards, 353–354
- Occupational setting  
human-animal interaction in, 343  
reverse zoonosis in, 347  
veterinarian role in, 344–345
- Ocular larva migrans, 261  
clinical presentation of, 263t  
development of, 263  
in human beings, 263  
treatment of, 264t
- Ocular toxoplasmosis, 268
- Oculoglandular tularemia, 292
- Ohara's disease, 289
- Oil of lemon eucalyptus, 73, 74t
- Okadaic acid, 95t  
as in vitro carcinogen, 101
- Older adult  
animal interaction with, 26  
cat mascot for, 25–26  
“loaner” dog and, 26–27
- Old World monkeys, herpes B infection, 300
- Old World virus, 172
- Oleander, acute toxic exposure to, 56
- One Health approach, 384
- One Health Initiative  
disease ecology and, 6  
disease surveillance and, 6  
logo for, 5f  
objectives for, 5  
overview of, 5–6  
research approaches for, 6
- One Health Task Force, 5
- Onion, toxicity in animals, 53t
- Oocyst  
of *Cryptosporidia*, 141  
of *Cryptosporidia parvum*, 142f
- O polysaccharide antigen, 164
- Orbifloxacin, bite infection, treatment for, 329t
- Orf virus  
affects and transmission of, 214  
animal husbandry and, 367t  
in animals, 216  
clinical presentation of, 217t  
diagnosis of  
in animals, 217  
in human beings, 216–217  
environmental risk factors for, 216  
geographic occurrence of, 215  
hosts, reservoir species, vectors for, 215–216  
in human beings, 216  
life cycle of, 216f  
*Parapoxvirus ovis* and, 215  
risk groups for, 215  
transmission/life cycle of, 216  
treatment of, 217
- Organic compound, as indoor air contaminant, 39t
- Organic dust  
animal workers and, 348  
farm animal worker and, 367
- Organic toxic dust syndrome (ODTS), 367
- Organophosphate compound  
animal toxicity from, 76  
human being, effect on, 72  
poisoning from, 77–78  
use of, 75t
- Oriental sore, 186
- Oropharyngeal tularemia, 292
- Orthomyxoviridae*, 180
- Oseltamivir (Tamiflu), 184, 185t
- OSHA Hazards Communication Standards, 353–354
- OSHA Respiratory Standard, 349–350, 359–362  
wildlife rehabilitator and, 369
- Osler, Sir William, 5
- Osteosarcoma, 58–59
- Otitis externa  
in dog, 315f  
immunocompromised patient and, 315
- Otodectes cynotis*, 255  
zoonotic potential of, 255t
- Outer surface protein A (OSP A), vaccine for, 203
- Oxidizing agent, 360t
- P**
- Pain  
freedom from, 11b  
human-animal interaction and, 26
- Pancreas, toxicology testing and, 59t
- Panton-Valentine leukocidin (PVL), 210
- Papules, cause and appropriate action, 21t
- Paragonimiasis, 303
- Paragonimus*, 303
- Parapox virus infection, 215
- Parapoxvirus ovis*, 215  
micrograph of, 215f
- Parasitism, animal shelter guidelines for, 381b
- Paretic patient, example of, 32f
- Parinaud's oculoglandular syndrome, 121
- Paronychia, *Microsporum canis* as cause of, 387f
- Particulate, 41
- Parvovirus, canine, 107t
- Pasteurella*

- travel and, 300  
in visitation dogs, 31–32
- Pasteurella* infection, 327
- Pasteurella multocida*, 327, 327f
- Pasteurellosis, 108t
- Pasteurization, Q fever and, 224
- Pasture fever, 157
- Pathogen
- animal research facility worker exposure to, 364
  - animals reported in, 110t
  - animal worker exposure to, 351–353
  - farm animal worker exposure to, 368
  - intentional release of, 376–377
  - pet store worker exposure to, 366
  - zoo/aquarium worker exposure to, 366
- Pathogenic fungi
- animal workers and, 348
  - control strategies for, 346t
- Pedestrian path, 38f
- Pelican, HAB-related illness in, 99t
- Peliosis hepatitis, 121f, 122t
- Peripheral nervous system, lead exposure and, 68
- Permethrin/pyrethroid
- characteristics of, 72
  - use of, in animals, 75t
- Persin, toxicity in animals, 53t
- Personal protective equipment, anthrax and, 119
- Pesticide
- animal exposure frequency, 54t
  - for animals, 73–76, 75t
  - animal toxicity from
    - high levels of, 76
    - low levels of, 73–76
    - moderate levels of, 76
  - toxicity of, 72
    - in animals, 77
    - in human beings, 76–77
    - risk groups for, 76
  - See also* Rodenticide
- Pesticide poisoning
- diagnosis of, 77–78
  - management of, 78
  - treatment of, 78t
- Pet
- acute care visit and, 12–13
  - benefits/percentage of, 1
  - bite infection, treatment for, 329t
  - cyanobacteria toxins and, 100
  - human behavior/domestic violence, as indicators of, 33–34
  - immunocompromised patient and, 315
  - lead exposure and
    - risk of, 68
    - as sentinel of, 68
  - separation/loss of, impact of, 32–33
  - toxicant exposure and, 52
  - See also* Companion animal
- Pet allergy, risk factors for, 44
- Pet ownership
- medical recommendations for, 29–30
  - physical/cognitive ability and, 29
  - physiological/psychosocial effects of, 27–29
  - recommendation, guidelines for, 29t
- Pet proofing, 51
- Pets Act, The, 379
- Pet shelter
- health/disease control at, 381b
  - injury/illness prevention at, 382b
- Pet store, inspection and regulation of, 379t
- Pet store worker
- hazards and, 366
  - occupational health/safety of, 366
  - occupational medicine services for
    - injury, exposure, illness management for, 366
    - medical surveillance for, 366
    - preplacement screening of, 366
    - vaccinations and, 366
- Pet trade
- companion animals and, 309
  - control efforts for, 311–313
  - infections linked to, 310–311
  - reptiles and, 309
  - wildlife and, 309
- Pet travel. *See* Travel
- PFOA fumes
- acute toxic exposure to, 57
  - toxic exposure of, 58t
- Pharmaceutical, animal exposure
- frequency, 54t
- Pharyngeal plague
- clinical presentation of, 221t
  - in human beings, 220
- Phenol, 360t
- Phlebovirus, 243, 243f
- Physical examination, for foodborne illness
- in animals, 341
  - in human beings, 339
- Physical hazard
- animal workers and
    - control strategies for, 346t
    - types of, 349
  - farm animal worker and, 368
  - veterinary personnel and, 359
  - zoo/aquarium worker and, 365
- Physician
- disease reporting/notification by, 10
  - home/worksites visits by, 3
  - malpractice liability for, 8–9
  - practice, scope of, 8
- Physician-veterinary contact, advantages of, 9
- Picardid, 73, 74t
- Pigeon breeder's lung, 45
- Pig-handler's itch, 254
- Pit viper
- domestic animal bites from, 84
  - head of, 83f
  - treatment for bite, 83–84
  - types of, 83
  - venom of, 83
- Plague
- acquiring, routes of, 2f
  - animal exposure to, implications of, 378t
  - in animals, 220
  - cause and effects of, 218
  - clinical presentation of, 221t
  - diagnosis of, 220–221
  - environmental risk factors for, 220
  - epidemiological features of, 219f
  - geographic occurrence of, 219
  - hosts, reservoir species, vectors for, 219
  - in human beings, 220
  - risk groups for, 219
  - transmission/life cycle of, 219–220
  - treatment of, 222t
    - in animals, 221
    - in human beings, 221
- Plant
- animal exposure frequency, 54t
  - toxic exposure of, 58t
  - toxicology testing and, 59t
  - See also* Poisonous plant
- Plant crop, safe fertilizer for, 332–333
- Plasmodium knowlesi*, travel and, 303
- Pneumonia, Q fever and, 226f
- Pneumonic plague
- clinical presentation of, 221t
  - in human beings, 220
  - radiograph of, 220f
  - treatment of, 222t
- Pneumonic tularemia, 291
- Poisoning
- acute toxic exposure and, 52
  - from cyanide, 52
  - substances reported
    - human exposures, 53t
    - nonhuman exposures, 54t
    - toxic agent percentages reported, 54t
  - See also* Carbon monoxide; Lead; Pesticide
- Poisonous lizard, 84
- Poisonous plant
- acute toxic exposure to, 56
  - exposures reported, 56t
- Poll evil, 126
- Polyaromatic hydrocarbon (PAH), nasal cancer and, 52
- Polycystic hydatid disease, 156
- Polymer fume fever, 57
- Pool, abandoned, mosquitos and, 380f
- Portuguese man-o-war, 88
- Postmortem toxicology testing, samples needed for, 59t
- Posttravel assessment, 305, 305b
- for pet, 307b
- Potomac horse fever, 157
- Poultry, virus associated with, 367t
- Powdered air purifying respirator (PAPR), 369f
- Prairie dog, plague and, 219, 220
- Pregnancy
- Chlamydomphila abortus* and, 136
  - Chlamydomphila psittaci* and, 136
  - complications and appropriate action, for veterinarian, 21t
  - lymphocytic choriomeningitis and, 328
  - raw food handling during, 316f
  - toxoplasmosis and, 268
- Preplacement screening
- for animal research facility worker, 363–364
  - for animal workers, 349
  - for farm animal worker, 368
  - for pet store workers, 366
  - for veterinary personnel, 359
  - for zoo/aquarium worker, 365–366
- Pretrageal lymphadenopathy, 121
- Pretravel risk assessment, 300, 305
- for pet, 307b
- Primary bronchus epithelium, 40f
- Primary pneumonic tularemia, 292
- Prion disease, 271
- development of, 273f
  - in human beings, 273
  - outbreak of, 271
  - treatment of, 275–276
- Privacy Rule. *See* Health Insurance Portability and Accountability Act (HIPAA)
- Professionalism, ethical principles and, 10–11
- Proglottid
- elements of, 149
  - example of, 149f
  - micrograph of, 150f
- Proportionalism, 10–11
- Propyl disulfide, toxicity in animals, 53t
- Propyl mercaptan, 377
- Prostate cancer, 58–59
- Protein allergen, 43–44
- Proteinase-sensitive prionopathy (PSPr), 273
- Pruritus, from eczema/dermatitis, 46
- Pseudomembranous colitis, 108t
- Pseudomonas pseudomallei* bacteria as, 108t
- Pseudoscabies, 254, 256
- clinical presentation of, 257t
  - treatment of, 259t
- Psittacine bird (parrot family), 133
- See also Chlamydomphila psittaci*
- Psittacosis
- CDC surveillance criteria for, 137
  - diagnosis of, 136
- Psychosocial stressor
- animal workers and
    - control strategies for, 346t
    - types of, 349
  - farm animal worker and, 368

- Psychosocial stressor (*Continued*)  
 veterinary personnel and, 359  
 zoo/aquarium worker and, 365
- PTFE fumes  
 acute toxic exposure to, 57  
 toxic exposure of, 58*t*
- Public disclosure, 10–11
- Public health  
 human-animal medicine and, 381  
 training/practice statistics for, 3–4, 3*t*  
 veterinarian role in, 4, 318–320
- Public health information (PHI), veterinarian role in, 10
- Public health professional, human-animal medicine, key points for, 7
- Public Health Service, HIV and zoonotic disease, 318
- Public health system  
 essential services of, 372–373  
 functions of, 373  
 lead, communication about, 389*b*  
 pathogen/chemical warfare and, 376–377
- Public health veterinarian, role of, 4
- Pulmonary nontuberculosis mycobacteria, 287
- Pulmonary tuberculosis, 282*f*
- Puma virus, 172
- Puncture-aspiration-injection-reaspiration (PAIR), for echinococcosis, 156–157
- Purple jellyfish, 88
- Pyrazinamide (PZA), 284–285, 284*t*
- Pyrethroid/permethrin  
 characteristics of, 73  
 use of  
   in animals, 75*t*  
   in human beings, 74*t*
- Pyrethrum, poisoning from, 77
- Q**
- QAC, 360*t*
- Q fever  
 animal exposure to, implications of, 378*t*  
 animal research facility worker and, 363  
 in animals, 225  
 antibiotics for, 227*t*  
 cause and transmission of, 222  
 clinical presentation of, 225*t*  
*Coxiella burnetii* and, 223  
 diagnosis of, 225  
 environmental risk factors for, 224–225  
 farm visits and, 302  
 geographic occurrence of, 223  
 hosts, reservoir species, vectors for, 224  
 in human beings, 225  
 life cycle of, 224*f*  
 phases of, 223  
 pneumonia and, 226*f*  
 risk groups for, 223–224  
 sheep and, 224*f*  
 transmission/life cycle of, 224  
 travel and, animal contact during, 302*f*  
 treatment of, 225–226
- Quadrilateral fever, 222
- Query fever, 222
- R**
- Rabbit, tularemia in, 292, 293*t*
- Rabbit fever, 289
- Rabies  
 acquiring, routes of, 2*f*  
 in animals, 231  
 management of, 234–235  
 bats and, 303  
 brown bat and, 232*f*  
 cases reported, 230*t*  
 cause of, 228  
 clinical presentation of, 233*t*  
 diagnosis of, 235  
 dog with, 233*f*  
 effects of, 227  
 environmental risk factors for, 230  
 geographic occurrence of, 228–229  
 Holstein with, 233*f*  
 hosts, reservoir species, vectors for, 229–230  
 in human beings, 230–231  
   first aid for, 231  
   management of, 231  
   risk assessment of, 231  
 monitoring for, 232  
 no indigenous cases of, 306*t*  
 pathogenesis of, 231*f*  
 postexposure prophylaxis  
   decision tree for, 234*f*  
   immunization and, 232–234  
   indications for, 232–234  
 risk groups for, 229  
 transmission of, 230, 232*f*  
 traveling pet and, 305  
 travel risks and, 300  
 treatment of  
   in animals, 235  
   in human beings, 235  
 vectors for, 229*f*
- Rabies vaccination  
 availability of, 235*t*  
 indications for, 227  
 postexposure prophylaxis, 325  
 rabid animals and, 328  
 travel and, 306
- Radiation, animal workers and, control strategies for, 346*t*
- Radioallergosorbent testing (RAST), 44
- Radon, sentinel events from, 41*t*
- Raisins, toxicity in animals, 53*t*
- Rash, cause and appropriate action  
 for human health care provider, 20*t*  
 for veterinarian, 21*t*
- Rat bite fever (Haverhill fever), 108*t*, 327–328  
 animal research facility worker and, 363
- Raw food, pregnancy and, 316*f*
- Raw milk  
 bovine tuberculosis and, 303  
*Coxiella burnetii* and, 224
- Real-time reverse transcriptase polymerase chain reaction (RRT-PCR), 184
- Red poultry mite, 255
- Red tide, 92  
 Florida, 94*b*
- Redwater of calves, 191
- Reed, Walter, 5
- Referral. *See* Medical referral
- Rehabilitation, animal-assisted therapy and, 25
- Renza (zanamivir), 184
- Religious festival, animal contact and, 302
- Renal disease, environmental exposures and, 60*t*
- Reporting, of disease/conditions, 10
- Reptile, 87*f*  
*Giardia lamblia* in, 170*f*  
 immunocompromised individual and, 317*f*  
 lead toxicity in, 69–70, 69*t*  
 pet trade and, 309  
*Salmonella* prevention in, 248*b*
- Reptile envenomation  
 cases reported, 82*t*  
 incidence and risk groups of, 82  
 types, symptoms, treatment for, 85*t*
- Research. *See* Animal research facility worker
- Respiratory medical clearance, 349–350
- Retail sector  
 foodborne illness risk and, 332*t*
- Retail sector, foodborne illness risk and, 334
- Retinitis, Rift Valley fever and, 246
- Retrieval, animal assistance with, 25
- Reverse transcriptase polymerase chain reaction (RT-PCR), 184
- Reverse zoonosis, 19  
 in occupational setting, 347
- Rhabdovirus, 228
- Rhesus monkey, herpes B infection in, 328*f*
- Rhinitis, 44
- Ribavirin, 174
- Rice field fever, 191
- Ricin toxin, animal exposure to, implications of, 378*t*
- Rickettsiae, disease caused by, 236–237
- Rickettsial infection, travel and, 303
- Rickettsia rickettsii*  
 effects in dog, 240*f*  
 handling of, 236
- Rifampin (RIF), 284–285, 284*t*
- Rift Valley fever (RVF)  
 animal exposure to, implications of, 378*t*  
 in animals, 246  
 animal workers and, 345–347  
 clinical presentation of, 247*t*  
 diagnosis of, 246  
 effects of, 242  
 environmental risk factors for, 245–246  
 fatalities from, 246  
 geographic occurrence of, 243  
 hemorrhagic fever and, 246  
 hosts, reservoir species, vectors for, 244  
 in human beings, 246  
 meningoencephalitis and, 246  
 micrograph of, 243*f*  
 Phlebovirus and, 243  
 retinitis and, 246  
 risk groups for, 243–244  
 risk map for, 245*f*  
 transmission/life cycle of, 244–245, 244*f*  
 treatment of, 246–247
- Rimantadine, 184
- Ringworm. *See* Dermatophytosis
- Risk assessment  
 for animal workers, 351  
 for dog, 390*f*
- River otter attack, 325, 327*f*
- Rocky Mountain spotted fever  
 acquiring, routes of, 2*f*  
 in animals, 240  
 antibiotics for, 241*t*  
 clinical presentation of, 263*t*  
 diagnosis of, 240–241  
 effects of, 236  
 environmental risk factors for, 239  
 example of, 22*f*  
 exanthem of, 239*f*  
 geographic occurrence of, 237  
 hosts, reservoir species, vectors for, 237–238  
 in human beings, 239–240  
 risk groups for, 237  
 transmission of, 239*f*  
 treatment of, 241
- Rocky Mountain wood tick (*Dermacentor andersoni*)  
 Rocky Mountain spotted fever and, 237–238  
 view of, 237–238
- Rodent  
 plague and, 219  
 tularemia in, 292
- Rodenticide  
 acute toxic exposure to, 56–57  
 animal exposure frequency, 54*t*  
 toxic exposure of, 58*t*  
*See also* Pesticide
- Rodent infestation, prevention of, 172*b*, 218
- Roundworm infection, 261  
 traveling pet and, 305  
*See also* *Toxocara* infection
- Ruminant, *Escherichia coli* and, 316

- S**
- Safari, zoonotic disease and, 303
- Salmonella*, 249
- African hedgehog and, 310
  - animal exposure to, implications of, 378*t*
  - animal husbandry and, 367*t*
  - in animals, 251–252
  - avian salpingitis and, 252*f*
  - box turtles and, 250*f*
  - brochure for, 249*f*
  - in chicks/ducks, 316
  - dermatitis and, 252*f*
  - effects of, 248
  - environmental risk factors for, 251–252
  - exposure to, reducing, 316
  - family Enterobacteriaceae and, 249
  - farm visits and, 302
  - geographic occurrence of, 249
  - in human beings, 251
  - international animal trade and, 310
  - presentation/management of, 336*t*
  - reporting of, 341
  - reptile pet trade and, 309
  - risk groups for, 249–250
  - transmission/life cycle of, 250–251
  - transmission prevention, 248*b*
  - in visitation dogs, 31–32
- Salmonella choleraesuis*, 251
- Salmonella dublin*, 251
- Salmonella enteritidis*, 249
- Salmonella gastroenteritis*
- effects of, 251
  - pathogenesis of, 251*f*
- Salmonella paratyphi*, 250
- Salmonella typhi*, 250
- Salmonella typhimurium*, 249
- Salmonellosis
- acquiring, routes of, 2*f*
  - antibiotics for, 253*t*
  - clinical presentation of, 252*t*
  - diagnosis of, 252–253
  - effects of, 248
  - hosts, reservoir species, vectors for, 250
  - risk groups for, 249–250
  - treatment of
    - in animals, 253
    - in human beings, 253
- Sandbox, animal contact and, 304
- Sandworm, 174
- São Paulo fever, 236
- Sarcoptes scabiei*, 254
- characteristics of, 254–255
  - hyperkeratosis and, 256*f*
  - view of, 255*f*
  - zoonotic potential of, 255*t*
- Sarcoptic itch/mange, 254
- in guinea pig, 258*f*
  - in horses, 258
- SARS-like coronavirus, 303
- Saxitoxin, 95*t*
- HAB-related illness and, 97*t*
- Scabies
- in animals, 257–258
  - clinical presentation of, 257*t*
  - diagnosis of, 258–259
  - in dog, 258*f*
  - environmental risk factors for, 256–257
  - geographic occurrence of, 255
  - in human beings, 257
  - risk groups for, 255–256
  - Sarcoptes scabiei* and, 254
  - transmission/life cycle of, 256, 256*f*
  - treatment of, 259*t*
    - in animals, 260
    - in human beings, 259–260
  - wet mount prep of, 259*f*
- Scalp ringworm, 387*f*
- Schwabe, Dr. Calvin W., 5
- Scorpion, 82*f*
- Scorpion sting, 82
- symptoms and treatment of, 85*t*
- Scrapie, 271, 274*f*
- clinical presentation of, 275*t*
  - diagnosis of, 275
  - geographic occurrence of, 272
  - host for, 272
  - signs and symptoms of, 273
  - transmission/life cycle of, 272
- Screening/follow-up questions
- for acute care visit, 13*t*
  - for human health risk, 17*t*
- Scyphozoa, 88, 89*t*
- Sea anemone sting, 88
- Sea bather's eruption (larvae), 88
- Seabird
- contaminated fish and, 101
  - HAB-related illness in, 99*t*
- Seal finger, 364–365
- Sea lion
- HAB-related death of, 101
  - HAB-related illness in, 99*t*
- Seal pox, 215
- Sea snake
- toxicity of, 90–91
  - types, manifestation, treatment for, 89*t*
- Seasonal flu, 177
- Sea urchin (Echinodermata), 88–90
- Selamectin
- toxicity of, 76
  - use of, 75*t*
- Select Agent
- Coxiella burnetii* as, 225
  - Rickettsia rickettsii* as, 236
- Sentinel, animals as, 51–52
- Sentinel disease, 18–23
- Sentinel event, 1–3
- from indoor air quality problems, 41*t*
  - potential environmental, 19–23
- Separation, from pet, impact of, 32–33
- Septicemic plague
- clinical presentation of, 221*t*
  - in human beings, 220
- Serpiginous rash, cause and appropriate action, 21*t*
- Serum, toxicology testing and, 59*t*
- Service animal
- companion animals versus, 26
  - health clearance examination for, 31*b*
- Service dog
- behavioral evaluation for, 32*f*
  - use of, 25
  - visually impaired, helping, 25*f*
- Severe acute respiratory syndrome (SARS), 302–303
- first case of, 345–347
- Shared risk approach, 106
- Sheep
- brucellosis in, 126
  - Chlamydiae* infection in, 137*t*
  - Chlamydia abortus* and, 136
  - Escherichia coli* infection in, 166
  - Q fever and, 224*f*
  - tularemia in, 292, 293*t*
  - viruses associated with, 367*t*
  - See also* Orf virus
- Shiga toxin, 164
- Shigella dysenteriae*, 164
- animal exposure to, implications of, 378*t*
  - reporting of, 341
- Sick animal visit
- animal health risk assessment form, 16*f*
  - health assessment during, 15–17
  - human-animal disease risk survey for, 17*f*
- Silo filler's disease, 333, 348–349
- Simian foamy virus infection, 300
- animal research facility worker and, 362
- Simian immunodeficiency virus
- animal research facility worker and, 362
  - bushmeat and, 303–304
- Simple cutaneous leishmaniasis, 188
- Skin, *Sarcoptes scabiei* and, 254–255
- Skin disease, nontuberculosis mycobacteria and, 287
- Skin prick testing, 44, 48*f*
- Skin rash, cause and appropriate action, 20*t*
- Skin scraping, scabies and, 258
- Slow virus infection, transmissible spongiform encephalopathy and, 272
- Slug bait, 58*t*
- Small intestine, cryptosporidiosis in, 140, 140*f*
- Smith, Dr. Theobald, 5
- Smoking
- carboxyhemoglobin levels from, 63
  - cessation of, 51*f*
  - sentinel events from, 41*t*
- Snake
- cryptosporidiosis in, 142–143
  - elapid family of, 84
  - venomous, families of, 82–83
  - See also* Pit viper
- Snakebite
- Australian pressure-immobilization technique for, 87*f*
  - cases reported, 82*t*
  - renal tissue after, 87*f*
  - swelling from, 83*f*, 84*f*
- Sneezing, cause and appropriate action for, 20*t*
- Social interaction, animal-assisted activity and, 25
- Social work, animal-assisted activity/therapy and, 29
- Soft tissue disease, nontuberculosis mycobacteria and, 287
- Solid agar media, 282
- Somnolence, 20*t*
- Sore throat, 21*t*
- Sound discrimination, service dogs and, 25
- Souvenir, animal hide as, 304–305
- Special Pathogens Unit, 4
- Species diversity, habitat destruction and, 37–38
- Spider
- population of, 81
  - types of, 81
- Spider bite, 81–82
- symptoms and treatment of, 85*t*
- Spinosad
- toxicity of, 76
  - use of, 75*t*
- Spirometry, for animal workers, 350–351
- Spoligotyping, 282
- Spongiform encephalopathy, scrapie, 274*f*
- Sporadic Creutzfeldt-Jakob disease (sCJD)
- characteristics of, 273
  - clinical presentation of, 275*t*
- Sporotrichosis, 328
- Spurred/leopard tortoise, heartwater and, 310
- Staphylococcal cassette chromosome mec (SCCmec), types of, 210
- Staphylococcal food poisoning, 335–338
- Staphylococcus aureus*
- antibiotic resistance of, 210
  - effects of, 209–210
  - food poisoning and, 335–338
  - geographic occurrence of, 210–211
  - presentation/management of, 336*t*
  - scabies and, 256, 257
  - See also* Methicillin-resistant *Staphylococcus aureus* infection
- Staphylococcus pseudintermedius*, 211
- State public health veterinarian, role of, 4
- Stinging nettle, 88
- Stingray envenomation, 89*t*
- St. Louis encephalitis (SLE), 294
- Streptobacillus moniliformis*, 327
- Streptococcosis, 108*t*
- Streptococcus*, scabies and, 256, 257
- Streptococcus suis*, animal husbandry and, 367*t*

- Streptococcus zooepidemicus, 2*f*  
 Streptomycin, 285  
   for tularemia, 293*t*  
 Stress. *See* Psychosocial stressor  
 Stuttgart disease, 191  
 Subacute spongiform encephalopathy, 271  
 Sudden death. *See* Death  
 Swamp fever, 191  
 Swine, 181  
   *Bordetella bronchiseptica* and, 316  
   tularemia in, 293*t*  
   viruses associated with, 367*t*  
 Swine flu, 177  
 Swineherd fever, 191  
 Swine influenza A H1N1 virus, 178  
   effects of, 181  
   morbidity from, 182  
   signs of, 182  
 Symptomatic cyst disease, 156
- T**  
*Taenia saginata*, 338  
 Taeniasis  
   life cycle of, 339*f*  
   overview of, 338  
   presentation/management of, 336*t*  
*Taenia solium*, 338  
 Tamiflu (oseltamivir), 184  
 Tapeworm. *See* Dipylidiasis  
   *See also* Echinococcosis  
 Tarantula, 81  
 Teflon fumes  
   acute toxic exposure to, 57  
   toxic exposure of, 58*t*  
 Tenosynovitis, of hand, 287  
 Tetanus vaccination, 300–302, 325–327  
   indications for, 327*t*  
 Tetracycline  
   for *Chlamydomydia psittaci* infection, 138, 138*t*  
   seal finger and, 364–365  
   for tularemia, 293*t*  
 Theobromine, toxicity in animals, 53*t*  
 Therapeutic horsemanship, 26  
 Therapy dog, behavioral evaluation for, 32*f*  
 Thermophilic bacteria, 45  
 Thimble jellyfish, 88  
 Thirst, freedom from, 11*b*  
 Ticarcillin, bite infection, treatment for, 329*t*  
 Tick  
   *Borrelia burgdorferi* and, 198  
   *Coxiella burnetii* and, 224  
   Lyme disease and, 195–196  
   pest management for, 158*b*  
   *Rickettsia rickettsii* and, 238  
   Rocky Mountain spotted fever and, 237–238  
   sizes of, 199*f*  
   *See also* Anaplasmosis; Ehrlichiosis; Tularemia  
 Tickborne fever/disease, 157, 236  
   shared environment exposure to, 389  
 Tinea capitis, *Microsporum canis* causing, 146*f*  
 Tinea corporis, 146  
 Tinea infection. *See* Dermatophytosis  
 Tinea pedis, 146  
 Toad  
   *Bufo marinus* (cane/marine toad), 88*f*  
   dog poisoning by, 88  
 Toad intoxication, 84–88  
   symptoms and treatment of, 85*t*  
 Toadstool  
   acute toxic exposure to, 56  
   toxic exposure of, 58*t*  
 Tobacco smoke  
   elimination of, 51*f*  
   sentinel events from, 41*t*  
 Tobramycin, for tularemia, 293*t*  
 Total airborne hydrocarbon, 41  
*Toxascaris leonina*, 261–262
- Toxic exposure, 50–104  
   acute, 52–57  
   identification of, 57  
   metabolism and, 52  
   prevention of, 51  
   *See also* Acute toxic exposure; Chronic toxic exposure  
 Toxicology testing, samples need for, 59*t*  
*Toxocara*  
   sandboxes and, 304  
   in visitation dogs, 31–32  
*Toxocara canis*  
   characteristics of, 261–262  
   clinical presentation of, 263*t*  
   life cycle of, 262*f*  
   ocular larva migrans and, 263  
   ova from, 264*f*  
   signs of, 263  
   size of, 261*f*  
*Toxocara cati*  
   characteristics of, 261–262  
   clinical presentation of, 263*t*  
   life cycle of, 262*f*  
*Toxocara* infection, 261  
   diagnosis of, 263–264  
   geographic occurrence of, 262  
   in human beings, 263  
   risk groups for, 262  
   traveling pet and, 305  
   treatment of  
     in animals, 264  
     in human beings, 264  
*Toxocara* infestation, 261  
 Toxocariasis  
   clinical presentation of, 263*t*  
   treatment of, 264*t*  
*Toxoplasma*, 336*t*  
*Toxoplasma* abscess, MRI image of, 268*f*  
*Toxoplasma gondii*  
   infection, source of, 315  
   photomicrograph of, 269*f*  
   stages of, 266  
*Toxoplasma gondii*–induced abortion, 269*f*  
 Toxoplasmosis  
   in animals, 268–269  
   clinical presentation of, 270*t*  
   congenital, with hydrocephalus, 269*f*  
   diagnosis of  
     in animals, 269  
     in human beings, 269  
   effects of, 265  
   environmental risk factors for, 267–268  
   geographic occurrence of, 266  
   histopathology of, 266*f*  
   HIV-infected person and, 319*t*  
   hosts, reservoir species, vectors for, 266  
   in human beings, 268  
   lipemia retinalis and, 269*f*  
   risk groups for, 266  
   sandboxes and, 304  
   *Toxoplasma gondii* and, 266  
   transmission/life cycle of, 266–267, 267*f*  
   treatment of, 269–271, 270*t*  
 Tracker dog disease, 157  
 Training, for animal workers, 351  
 Transmissible mink encephalopathy, 271  
   clinical presentation of, 275*t*  
   geographic occurrence of, 272  
   signs and symptoms of, 273–274  
   transmission/life cycle of, 272  
 Transmissible spongiform encephalopathy, 271  
   in animals, 273–274  
   cellular prion protein (PrP<sup>c</sup>) and, 272  
   clinical presentation of, 275*t*  
   environmental risk factors for, 272–273  
   in human beings, 273
- outbreak of, 271  
 treatment of, 275–276  
 Transparency, 10–11  
 Trauma, cause and appropriate action  
   for human health care provider, 20*t*  
   for veterinarian, 21*t*  
 Travel  
   animal contact during, 299  
   beaches and sandboxes, 304  
   bushmeat consumption and, 303–304  
   farm visits and, 302  
   festivals and, 302  
   injuries and, 300–302  
   live animal market and, 302–303  
   safari and wilderness, 303  
   souvenirs and, 304–305  
   assessment for  
     posttravel, 305, 305*b*, 307*b*  
     pretravel, 300, 307*b*  
   CDC regulations for, 306  
   foodborne illness reporting and, 341  
   illness after, 307  
   with pet  
     documentation/regulations for, 305–307  
     infectious disease and, 305  
     logistics for, 305  
     reasons for, 305  
     risks associated with, 305  
   zoonotic disease, reduction of, 302–303  
 Travel medicine  
   elements of, 300*t*  
   infectious disease and, 299–300  
 Tremorgenic mycotoxins, toxicity in animals, 53*t*  
*Trichinella*, 338  
   animal husbandry and, 367*t*  
   presentation/management of, 336*t*  
*Trichinella spiralis*, 341*f*  
 Trichinellosis, 338–339  
*Trichophyton*, 144  
*Trichophyton*, *Tinea capitis* and, 146  
*Trichophyton mentagrophytes*  
   in culture, 147*f*  
   geographic occurrence of, 144  
   host for, 144–145  
*Trichophyton tonsurans*, 144  
*Trichophyton verrucosum*, 144  
 Trichophytosis, 144  
 Trophozoites, 168*f*, 169*f*  
 Tropical canine pancytopenia, 157  
 Trypanosomiasis, 303  
 Tuberculin skin test  
   in cattle, 284  
   in human beings, 283–284  
   indications for, 283  
   positivity, criteria for, 283*t*  
   technique for, 283*f*  
 Tuberculoma, MRI image of, 281*f*  
 Tuberculosis  
   aerosol transmission of, 279*b*  
   animal research facility worker and, 363  
   in animals, 281–282  
   in companion animal, 285–286  
   diagnosis of  
     active disease, 282–283  
     latent infection, 283–284  
   environmental risk factors for, 279  
   HIV and, 279–280  
   hosts, reservoir species, vectors for, 278  
   in human beings, 279–281  
   phases of infection, 280*f*  
   prevalence of, 276  
   pulmonary, radiograph of, 282*f*  
   radiograph of, 282–283, 282*f*  
   risk factors for, 280*b*  
   risk groups for, 278, 279*b*  
   of spine, 281*f*  
   transmission of, 278



- treatment of  
 in animals, 285–286  
 drug regimen for, 284*t*  
 in human beings, 284–285
- Tuberculosis culture, methods of, 282
- Tufts Animal Care and Condition Scale, 33
- Tularemia, 289  
 acquiring, routes of, 2*f*  
 animal exposure to, implications of, 378*t*  
 in animals, 292  
 clinical presentation of, 293*t*  
 cutaneous lesion and, 292*f*  
 diagnosis of  
 in animals, 292  
 in human beings, 292  
 environmental risk factors for, 291, 291*f*  
 geographic occurrence of, 290  
 hosts, reservoir species, vectors for, 290–291  
 in human beings, 291–292, 293*t*  
 postexposure prophylaxis, 293*t*  
 risk groups for, 290  
 transmission/life cycle of, 291  
 treatment of, 292, 293*t*  
 wildlife pets and, 311
- Tunga penetrans* (Jiggers), 304
- Tungiasis, 304
- Typhoidal tularemia, 292  
 treatment of, 293*t*
- U**
- Ulceroglandular tularemia, 292
- Undulant fever, 123
- Unilocular hydatid disease, 153
- United Nations Children's Emergency Fund (UNICEF), 5
- United Nations System Influenza Coordination, 5
- Upper airway disorder, 44
- Upper respiratory disease, *Chlamydomydia psittaci* and, 136
- Upper respiratory signs, cause and appropriate action for human health care provider, 20*t*  
 for veterinarian, 21*t*
- Urine, toxicology testing and, 59*t*
- USDA, animal disease/health and, 341
- "Us versus them" approach, 105–106
- Uta, 186
- Uveitis, toxoplasmosis and, 268
- V**
- Vaccination  
 animal research facility worker and, 364  
 animal shelter guidelines for, 381*b*  
 animal workers and, 351  
 for farm animal worker, 368  
 live vaccine, as hazard, 346*t*  
 pet store worker and, 366  
 tetanus, 300–302, 325–327  
*See also* Rabies vaccination
- Variant Creutzfeldt-Jakob disease (vCJD), 271  
 bovine spongiform encephalopathy and, 273  
 clinical presentation of, 275*t*  
 diagnosis of, 274  
 geographic occurrence of, 272  
 photomicrograph of, 275*f*  
 risk groups for, 272  
 transmission/life cycle of, 272
- Vascular peliosis, 121*f*
- Vector-borne disease, traveling pet and, 305
- Ventilation, inadequate, 39–40  
 sentinel events from, 41*t*
- Verocytotoxin, 164
- Vertebral tuberculosis, 281*f*
- Vesicular stomach virus, animal husbandry and, 367*t*
- Veterinarian  
 baseline human health history for, 13–15  
*Brucella* inoculation of, 124  
 cat-scratch disease and, 120  
 CDC, role at, 4  
 disease reporting/notification by, 10  
 elephant examination by, 365*f*  
 home/worksites visits by, 3  
 human-animal medicine, key points for, 7  
 human health, role in, 3–4  
 malpractice liability for, 8–9  
 occupational health/safety role of, 343  
 occupational health team role, 344–345  
 practice, scope of, 8  
 public health role of, 318–320  
 state public health, role of, 4  
 at zoo, occupational illness/injury, 364  
 Veterinarian oath, 8*b*  
 Veterinary-human medical partnerships  
 cardiac surgical procedure for dog, 390–391  
 echocardiography for primate, 391–392  
 examples of, 390  
*See also* Human-animal medicine  
 Veterinary medicine  
 practice of, definition of, 8*b*  
 training/practice statistics for, 3–4, 3*t*  
 Veterinary personnel  
 allergens and, 354  
 anesthetic agent and, 359  
 chemical hazards and, 358–359  
 medical surveillance for, 359–362  
 occupational health/safety of, 353–362  
 occupational medicine services for, 359–362  
 physical hazards and, 359  
 preplacement screening of, 359  
 psychosocial stressors and, 359  
 zoonotic disease and, 354–358  
 Veterinary practice  
 behavioral services offered by, 30*t*  
 chemical hazards in, 358–359  
 disinfectant/cleaners used in, 360*t*  
 infection control plan for veterinary practice, model for, 355*f*  
 inspection and regulation of, 379*t*  
 Veterinary Practice Act, 8  
*Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Personnel*, 354  
*Vibrio vulnificus*  
 wound infection and, 364  
 zoo/aquarium worker and, 364  
 Viral hepatitis  
 animal research facility worker and, 363  
 travel and, 303  
 Virchow, Dr. Rudolf, 5  
 Visceral larva migrans  
 clinical presentation of, 263*t*  
 in human beings, 261, 263  
 treatment of, 264*t*  
 Visceral leishmaniasis, 186  
 cause of, 187  
 diagnosis of, 190–191  
 environmental risk factors for, 187–188  
 geographic occurrence of, 187  
 hosts, reservoir species, vectors for, 187  
 in human beings, 188–189  
 transmission/life cycle of, 187  
 treatment of, 190*t*  
 Vomiting, cause and appropriate action for human health care provider, 20*t*  
 for veterinarian, 21*t*  
 Vomitoxin  
 effects of, 339  
 presentation/management of, 336*t*
- W**
- Walking  
 dog-walking program, 26–27  
 pedestrian paths for, 38*f*  
 pet ownership and, 28
- Walking dandruff mite, 255
- Wapiti, chronic wasting disease in, 274*f*
- Warfarin  
 acute toxic exposure to, 56–57  
 toxic exposure of, 58*t*
- Water  
 cyanobacteria toxins in, 101  
 toxicology testing and, 59*t*
- Water damage, mold and, 41
- Weakness, cause and appropriate action for human health care provider, 20*t*  
 for veterinarian, 21*t*
- Weight loss, cause and appropriate action for human health care provider, 20*t*  
 for veterinarian, 21*t*
- Weill's disease, 191
- Western equine encephalitis (WEE), 294
- West Nile virus (WNV)  
 in animals, 296–298  
 clinical presentation of, 297*t*  
 diagnosis of, 298  
 discovery of, 294  
 environmental risk factors for, 296  
 Flavivirus and, 295–296  
 geographic occurrence of, 296  
 hosts, reservoir species, vectors for, 296  
 in human beings, 296, 297*t*  
 microscopy of, 295*f*  
 outbreaks of, 294  
 risk groups for, 296  
 transmission/life cycle of, 296, 296*f*  
 treatment of, 298
- Whale, HAB-related death of, 101
- Wheezing, 20*t*
- White-footed mouse (*Peromyscus leucopus*), 198, 199*f*
- White-tailed deer (*Odocoileus virginianus*), 198
- Whole blood, toxicology testing and, 59*t*
- Widow spider bite  
 effects of, *See also* Black widow spider, 81–82
- Wilderness, zoonotic disease and, 303
- Wildlife  
 cyanobacteria toxins and, 101–102  
 infections linked to, 310–311  
 pet trade and, 309  
 toxicant exposure and, 52  
 tuberculosis in, 276
- Wildlife pet, 1  
 malpractice liability and, 9
- Wildlife rehabilitator  
 hazards with, 368–369  
 occupational health/safety of, 369
- Wood dust, 45
- Wood tick  
 Rocky Mountain spotted fever and, 237–238  
 view of, 237–238
- Workers' compensation liability, 9
- Work-related asthma  
 prevention of, 358*b*  
 symptoms of, 353*b*
- Work-related injury/illness, liability and, 9
- World Bank, 5
- World Health Organization (WHO), 5
- World Organization for Animal Health, 5  
 disease outbreak reporting and, 341  
 disease reporting to, 373, 375*b*
- Wound  
 animal bite, infection risk, 324*t*  
 care for, 324  
 closure of, 325  
 culture of, 324  
 nonhealing, cause and appropriate action, 20*t*  
 tetanus prophylaxis, indication for, 327*t*  
*Vibrio vulnificus* and, 364
- Y**
- Yeast dough, toxicity in animals, 53*t*
- Yellow fever

Yellow fever (*Continued*)

- transmission of, 5
- travel and, 303

Yellow jacket, 80*f**Yersinia enterocolitica*

- overview of, 338
- presentation/management of, 336*t*

*Yersinia pestis*, 218

- as biological warfare, 219

Yersiniosis, 108*t*, 338**Z**Zanamivir (Relenza), 184, 185*t*

## Zinc sulfur concentration test (ZCST), 170

## Zinkernagel, Rolf, 5

## Zoo/aquarium worker

- allergens and, 364
- chemical hazards and, 365

- erysipeloid and, 364

- occupational health/safety of, 364

- occupational medicine services for, 365–366

- injury, exposure, illness management for, 366

- medical surveillance for, 366

- preplacement screening of, 365–366

- physical hazards and, 365

- psychosocial stressors and, 365

- veterinarian, occupational illness/injury of, 364

- zoonotic disease and, 364–365

## Zoonotic disease, 105–298

- animal health and, 1–3

- animal research facility worker and, 362–363

- control of, 11

- farm animal worker and, 367

- HIV and, 318

- in human, 19

- immunocompromised patient and, 315–318

- infectious disease and, 1

- malpractice liability and, 8–9

- in pet store setting, 366

- reverse, 19

- routes of, 2*f*

- as sentinel event, 1–3

- training/practice statistics for, 3

- veterinary personnel and, 354–358

- zoo/aquarium worker and, 364

- See also* specific types of

- See also* Travel

## Zoonotic pathogen

- animal workers and, 345–347

- control strategies for, 346*t*

- exposure to, routes of, 347

## Zoophilic dermatophyte

- classification of, 145*t*

- transmission of, 144