## Index

**Abdomen**
- abdominal ultrasound: 17.3–6
- antibiotic coverage: 10.8
- CT: 17.6
- diagnosis: 17.1–2
- laparotomy, indications: 17.2
- location: 17.1
- operation by organ, technique: 17.9–14
- peritoneal lavage: 17.7
- retroperitoneal injuries: 17.15–16
- wound closure: 17.16

**Abdominal Ultrasound (FAST):** 17.3–6

**Abdominal Closure:** 12.5; 17.16
- in abdominal compartment syndrome: 12.5

**Abdominal Compartment Syndrome:** 12.5; 12.6–7

**Abdominal Wall Defects:** 12.5

**Abdominal Pressure:** 12.8

**Abscesses, Intraabdominal in Systemic Sepsis:** 10.9

**Acetabulum/Hip Joint Injuries:** 21.3

**Acetazolamide**
- in eye injury: 14.7
- in AMS: 29.26

**Acidosis**
- metabolic: 11.12
- reversal: 12.6

**Acute Mountain Sickness (AMS):** 29.24–27

**Acute Renal Failure:** 11.9–10
- dialysis: 11.11
- in crush syndrome: 22.6

**Acute Tubular Necrosis:** 11.9

**Adnexa, uterine:** 19.3, 5–7

**Adult Respiratory Distress Syndrome (ARDS):** 11.7

**Aeromedical Evacuation (AE)**
- aviation environment: 4.3
- cabin altitude restriction: 4.4
- concepts of operation: 4.6
- decreased humidity: 4.5
- gravitational stress: 4.4
- head injuries: 15.15–16
- ICU preparation for evacuation: 11.15

**Aeromedical Evacuation Liaison Team (AELT):** 4.6

**Aeromedical Evacuation (AE)
- aviation environment:** 4.3
- cabin altitude restriction: 4.4
- concepts of operation: 4.6
- decreased humidity: 4.5
- gravitational stress: 4.4
- head injuries: 15.15–16
- ICU preparation for evacuation: 11.15

**Airway Management**
- blind intubation: 5.8
- chin-lift and head tilt/two handed jaw thrust/oropharyngeal/
- cricothyrotomy: 5.6
- difficulty: 5.6–7
- endotracheal: 9.5
- laryngeal mask airway: 5.7

**Air Splints, Problems in Aeromedical Evacuation:** 4.4

**AK-47:** 1.7

**Albumin, in Burns:** 28.6–7

**Alpha Particles:** 30.5

**Alkalosis, Metabolic:** 11.12

**Altitude Illness**
- acute mountain sickness (AMS): 29.24–27
- altitude basics: 29.23
- descent basics: 29.23–24
- high altitude pharyngitis and bronchitis: 29.27
- high altitude peripheral edema: 29.27–28
- high altitude pulmonary edema: 29.29–33
- subacute mountain sickness: 29.28–29
- thromboembolic events at altitude: 29.28

**Altitude Restriction:** 4.4

**Amitriptyline, in Cold Injury:** 29.3

**Ampicillin:** 10.8

**Amputation**
indications: 25.1
level: 25.2
open length preserving: 25.2
postoperative management: 25.5–6
radiological injury: 30.6
skin traction: 25.5
technique: 25.3
transportation cast: 25.6–8
Anal Laceration: 19.1, 11
Anastomosis
colon: 17.3
small intestine: 17.11
Ancef, see Cefazolin
Anesthesia
airway: 9.1
general: 9.6–8
field: 9.9–12
induction: 9.2
induction agents: 9.3–5
neuroaxial: 9.9
rapid sequence intubation: 9.2–5
Anesthetics, Effect on Hypotension: 9.5
Anhidrotic Heat Exhaustion: 29.20
Ankles
aspiration: 25.1
disarticulation: 25.4
surgical approach: 24.4
Ankle-Brachial Index: 27.2
Anterior-lateral Thoracotomy: 12.12
Anthrax: 31.1–2, 5
Anticonvulsants: 15.7
Antidotes, see chapter 32
Antipersonnel Mines, Static/Bounding/Horizontal: 1.6–7
Antitoxin, Tetanus: 10.6
Anuria: 11.9–12
Arch Bar: 13.5
Arm
forearm: 22.10–11
long arm cast: 25.8
upper arm: 22.10
Armed Vehicle Crew Casualties: 1.9, 11
Army, Levels of Care: 2.1-10
Arteries
brachial: 27.5
descending aorta: 16.7
femoral: 27.4
grafts: 27.7
iliac: 27.3
injury: 27.1–2
internal carotid: 13.15
internal maxillary: 13.7
popliteal: 27.4–5
radial: 27.5
shunts: 27.6
vertebral: 13.15
Arthrotomy: 24.3–5
Aspiration, of pericardium: 16.3
Atriocaval Shunt: 17.12
Atropine
chemical injury: 32.2
ophthalmic: 14.4
Autotransfusion: 7.11–12
Bacillus Anthrasis, see Anthrax
Bacitracin, in Eye Injuries: 14.3
Bacteria, Infection in War Wounds: 10.2, 5
Bacterial Agents: 31.5
Bacterial Keratitis: 14.5
Bacteriology, of War Wounds: 10.2–3
Ballistics: 1.1–4, 7–9
Bandages
pressure: 6.2
fibrin: 6.7–8
Barbiturates
anesthesia: 9.4
traumatic brain injury: 11.4
Battle’s Sign: 13.18
Battalion Aid Station/Level I Medical Treatment Facility: 2.1–2
Beryllium, in hypothermia: 29.9
Beta Particles: 30.5
Biliary Tract Injury: 17.12–13
Biobrane: 28.14
Biological Warfare
bacterial agents: 31.5
decontamination mechanical/chemical/physical: 31.2–3
detection and diagnosis: 31.1
biological toxins: 31.5
infection control/evacuation: 31.3
precautions: 31.4
prevention and protection: 31.2
quarantine: 31.4
viral agents: 31.6
Bladder
dysfunction in spinal cord injury: 20.10
injuries: 18.9–10
pelvic fracture: 21.2
pressure measurement: 12.7–8

Blast
mechanisms of injury: 1.4; 1.12–13
nuclear detonation: 30.1–2, 4
over pressure causing CNS injury: 15.2

Blast Injury
brain: 15.2, 11
lung: 16.1
nuclear detonation: 30.4
tympanic membrane: 13.18
ureter: 18.6

Blood
replacement in shock: 7.3
massive transfusions: 7.8

Blood Products in the Field: 7.6
Blood Bank: 7.6, 9–10
Blood Platelets: 7.7

Brachial Plexus Block: 9.8

Brain
entrance wounds: 15.2
primary brain injury: 15.4
secondary brain injury: 15.4, 7

Bradycardia
neurogenic shock: 7.2
spinal injury: 20.10

Burns
antibiotics: 28.8–9, 13
armored crew casualties: 1.9
carbon monoxide: 28.3
chemical: 28.11
electrical injury: 28.10–11
epidemiology: 3.9
excision: 28.13
excision and grafting: 28.12–15
first aid: 28.1–2
fluid resuscitation: 28.3–4
hyperkalemia in: 28.7, 11
pediatric: 33.3

phosphorous: 28.11–12
primary survey: 28.12–13
respiratory: 28.3
resuscitation management: 28.6–7
rule of nines: 28.4
topical chemotherapy: 28.7, 15
triage: 28.1
wound care: 28.7–9

BURP Maneuver: 5.4
Burr Holes: 15.12–13

Calf
compartments: 22.12
fasciotomy: 22.13

Carbon Monoxide Poisoning, in Burns: 28.3

Cardiac Arrhythmia: 11.8–9
Cardiac Contractility: 11.8
Cardiac injury: 16.3
tamponade: 16.3

Cavitation, Temporary: 1.1–2, 7–9

Cefazolin: 19.13
Cephalsporin: 23.2
Cefepime: 10.10
Cefotetin: 10.8
Cefoxitin: 10.8
Ceftazidime: 10.10
Ceftriazone: 10.8
Emergency War Surgery

Cellulitis, Anaerobic: 10.6
Cerebral Injuries, see Head Injuries
Cerebral Perfusion Pressure (CPP): 11.3–4
  head injuries: 15.4
Cervical Spine Injury
  face and neck trauma: 13.2
  field management: 20.4–5
  immobilization: 20.6–7
  injuries to neck: 20.1–9
  management: 20.9–10
  traction: 20.6
Cervical Plexus Regional Block: 9.8
Cervix: 19.3–4
Cesarean Section: 19.9, 11–13
Chelating Agents, in Radiological Injury: 30.6
Chemical Agent Monitor (CAM): 32.7
Chemical Injuries
  cyanogens: 32.4–5
  incapacitating agents: 32.5
  initial treatment priorities: 32.1
  lung damaging agents: 32.4
  nerve agents: 32.2–3
  off-gassing: 32.6
  personal protection: 32.1
  post surgical procedure: 32.7
  specific chemical warfare (CW) agents and treatment: 32.2–5
  surgical treatment of chemical casualties: 32.6–7
  thickening agents: 32.5
  vesicants: 32.3
  wound decontaminations: 32.6
  wound exploration and debridement: 32.6–7
Chemotherapy, Topical, in Burns: 28.7–8
Chest Tube: 16.4–5
  care during evacuation: 3.2, 4
Chest Wounds, see chapter 16
Chilblains: 29.1
Chlorhexidine gluconate: 28.7
Cholecystectomy: 17.12
Cholecystitis, acalculous: 11.13
Cholera: 31.5
Cholecystoenterostomy: 17.3
Ciprofloxacin
  eye injuries: 14.2
  systemic sepsis: 10.10
Clindamycin
  intraabdominal infection: 10.8
  pulmonary infection: 10.8
  soft tissue wound infection: 10.7
Clostridial Myonecrosis: 10.6
Coagulopathy: 6.6; 11.5
  dilutional: 11.12; 12.6
  heat stroke: 29.14, 17
Cold Injury: 29.1–11
  frost bit: 29.4–7
  frostnip: 29.4
  hypothermia: 29.7–11
  non freezing: 29.1
  pernio: 29.2
  trench foot: 29.2–3
Colloids, in burns: 28.5–7
Colon Injuries: 17.13–14
  colostomy, indications: 17.13–14
Compartment Syndrome
  abdominal: 12.6–8, 10
  calf: 22.12–13
  foot: 26.6–8
  forearm: 22.10–11
  hand: 26.2–3
Compazine: 15.3
Concussion, of brain: 15.2, 10, 11
Conjunctiva: 14.6
Conray: 18.2
Consciousness, see Glasgow Coma Scale
Controlled Resuscitation: 7.4
Convulsions
  brain injuries: 15.7
  nerve agents: 88
  tetanus: 10.4
CONUS, see Level V: 2.10
Cooling, in Heat Injury: 29.15
Copper Sulfate: 28.12
Corne
  abrasion: 14.4
  antibiotics: 14.3
  chemical injuries: 14.3
  foreign bodies: 14.6
  ulcer: 14.5
Coxiella, see Q-Fever
Cramer Wire Splint: 25.8
Cranectomy: 11.4; 15.11
Craniotomy: 3.9; 11.4; 15.12–15
Cranioencephalic Wounds and Injuries, see Head Injuries
Creatinine Phosphokinase, in crush syndrome: 22.7
Cricoid Pressure (Selleck Maneuver): 5.3; 9.5
Cricothyrotomy: 5.2, 5.6–7; 13.2
Critical Care: 11.1
Critical Care Air Transport Teams (CCATTs): 4.9
 role: 11.15
Crush Syndrome: 22.6–8
Crystalloids Fluids: 7.3; 11.4
CT Scan: 15.6; 17.7
Cyanides: 32.4
Cyanomethemoglobin: 32.5
Cyanogen Chloride: 32.4
Cyclogyl: 14.5
Cycloplegia: 14.5
Cystography: 18.9–10
Cystostomy: 18.9–10
Damage Control Surgery (DCS)
 abdomen: 17.12
 critical care considerations: 11.1; 12.6–7
 head injuries: 15.1, 11
 indications: 12.2
 phases: 11.2
 planed reoperation: 12.8
 primary operation and hemorrhage control: 12.3–6
Debridement
 brain: 15.14
 frostbite: 29.6–7
 necrotizing soft tissue infections: 10.6–7
 soft tissue: 22.2–4
 radiological injury: 30.5
 tetanus: 10.6
 war wounds: 10.4
Decontamination, Radioactive: 30.6
Decubitus Ulcers: 20.10
Deep Vein Thrombosis: 11.12; 20.10
Delayed Triage: 3.2
Delayed Wound Closure
 soft tissue: 22.6
 radiological injury: 30.5
Dental Problems with Fractures: 13.4
Dexamethasone
 AMS: 29.26
 HACE: 29.33
 Dialysis, Indications: 11.11
 Diaphragm, injuries: 16.15
 Diarrhea, Bloody, in Radiation Injury: 30.4
 Diagnostic Peritoneal Lavage
 Diamox, see Acetazolamide
 Diazapam
 chemical injury: 32.2
 heat stroke: 29.16
 Diclofenac (ophthalmic): 14.4
Died of Wounds, definition: appendix 2
Difficult airway: 9.6
Dimercaprol: 32.3
Dislocations, of Cervical Spine: 20.3
Diuretics, in Crush Injury: 22.8
Dobutamine: 11.3
Dopamine: 11.3; 20.10
Doppler Flow Measurement: 27.2
Doxycycline, in Tetanus: 10.6
Drainage
 bladder: 18.10–1
 CSF: 15.10
 kidney: 18.5
Drawover Vaporizer: 9.9–12
Dressings
 amputations: 25.5
 burns: 28.8
 soft tissue: 22.5
Duodenum Injuries: 17.9–10
Duplex Ultrasound: 27.2
Dura: 15.14
Ebola: 31.5
Echelons of Medical Care, see Levels
Elbow
 aspiration: 24.3
 surgical approach: 24.4
 Electrical Injury: 28.10–11
Embolism, Air: 16.13
Empyema: 16.15
Endotracheal Intubation
 aeromedical evacuation: 4.3
 equipment: 9.2
 head injuries: 15.16
Energy, Kinetic, Antitank Missile: 1.10
Enflurane: 9.7
Endophthalmos: 14.9–10
Enucleation, of eye: 14.13
Enterotomy: 17.13
Epidural Block: 9.9
Epilepsy: 15.7
Epinephrine
 burn wound excision: 28.14
 neonatal resuscitation: 19.15
Episiotomy: 19.9–10
Equipment, Triage and Resuscitation
 Facility: 3.7
Erythromycin, in Eye Injuries: 14.3
Escharotomy
 care: 28.10
 preferred sites: 28.3
 thoracic: 28.3
 Eschars: 28.3, 9–10
 Eschmann Stylet: 5.4
Esophagus

XXXV
Emergency War Surgery

fistula: 13.17, 16.15
Etomidate: 5.3; 9.4–5
Evacuation: Precedence by Service: 3.6
Excision/Debridement, Inadequate: 22.4
Excision, see Debridement.
Expectant, in Triage: 3.2, 3.4
Expeditionary Medical Support Basic
(EMEDS)/EMEDS + 10, + 25: 2.4, 8
External Ear, Wound and Injuries: 13.19–20
External Fixation
ankle: 23.19
femoral diaphyseal fracture: 23.10–13
humerus: 23.8
knee: 23.18
pelvis: 21.3–4
tibial shaft: 23.13–17
Extremity Fractures
evacuation: 23.30–31
external fixation: 23.1, 10–20
skeletal traction: 23.19–20
transportation cast: 23.1, 4–10
wound management: 23.2–4
Eye Injuries, Epidemiology: 3.9
Eyelid, Laceration: 14.10–12
Face
airway: 13.1
cervical spine: 13.2
fractures: 13.3–9
initial management: 13.1
lacerations: 13.9
soft tissue: 13.9–11
vascular injury: 13.2
Facial Bones, Fractures
management: 13.1
mandibular: 13.3
mid-face (Le Fort): 13.7–9
nose: 13.5
Facial Nerves
anatomy: 13.10
injury: 13.10, 18
Fallopian Tubes: 19.5
Fallout, in Nuclear Detonation: 30.5
Fasciotomy
compartment syndrome: 22.9
crush injury: 22.8
extremities: 22.10–14
prophylactic: 22.9
Fecal Contamination: 17.15
Femoral artery/Vein: 27.3–4
Femur: 23.5–6, 23.11–14
Fentanyl: 5.3; 9.2
Fetus
delivery: 19.9
heart rate: 19.9, 11
Fever, in ICU: 11.2
FFP: 7.6, 8
Field Hospital: 2.9
Fission Products: 30.5
Fixator, External: 28.10–19
Flail Chest: 16.1, 4
Flash Blindness, in Radiological Injury: 30.5
Fleet Hospital: 2.8–9
Fluids
burns: 28.4–5
intravenous access
Fluorescein: 14.14, 14.6
Focused Abdominal Sonography for Trauma (FAST): 17.3
Fogarty Balloon Catheter: 27.6
Foot, Injuries: 26.5–8
Forward Resuscitative Surgery Team (FRSS): 2.5
Forward Surgical Team (FST): 2.3
Foot: 26.1–6
Four Cs: 22.4
Fractures: see chapter 23
antitank mines: 1.11
naso-orbital-ethmoid (NOE): 13.3
parachute injuries: 1.15
Fracture Table: 23.5–6
Francisella, see Tularemia
Frostbite: 29.4–7
field treatment: 29.5
grades of frost bite/superficial/deep: 29.4–5
MFT treatment: 29.5–7
Furosemide: 11.10
Gamma Radiation: 30.5
Gamow Bag: 29.31
Gardner-Wells Tongs: 20.6–8
Gastritis, stress: 11.5, 12
Gastrostomy: 17.10
General Hospital: 2.9
Gentamycin: 10.7, 8
Genitourinary Tract Injury
renal: 18.1–5
ureter: 18.6–8
bladder: 18.9–10
urethra: 18.10–12
external genitalia: 18.12–13
in pelvic fractures: 21.2
Glanders, see Burkholderia
Glasgow Coma Scale
adult: 15.5
modified for children: 33.5
Glycopyrrolate (Robinul): 9.7
Gray, Unit of Radiation Exposure (Gy): 30.3
Greater Saphenous Vein Cutdown: 8.3–4
Gynecologic/Obstetric Emergencies
Index

Cesarean Section: 19.11–13
neonatal resuscitation: 19.15
vaginal delivery: 19.9–11
vaginal hemorrhage: 19.7–8
uterine atony: 19.13–14

Gynecologic Trauma
abdominal hysterectomy: 19.4–6
adnexal injuries: 19.5–6
ovarian injuries: 19.6
retroperitoneal hematoma: 19.7
uterus/cervical injuries: 19.3–5
vaginal injuries: 19.2–3
vulval injuries: 19.1–2

Halo Immobilization: 20.5–6

Hand Injuries: 26.1–4

Hanta Virus: 31.5

Head Injuries
combat head injuries type: 15.1–2
evacuation: 15.15–16
mechanisms of injury: 15.4
medical management: 15.7–11
patient assessment and triage: 15.4–7
surgical management: 15.11–15
traditional classification of head injuries: 15.3

Hearing: 13.19

Heart, injuries: 16.12

Heat Injury
heat cramps: 29.11, 18–19
heat exhaustion: 29.11, 19–20
heat stroke: 29.13–1
minor heat illnesses: 29.19–22
presentation of heat stroke: 29–14
prevention of heat injury: 29.12–13
treatment of heat stroke: 29.15–18

Heimlich Valve: 3.4
Helmet: 13.4; 15.2
Hematoma, head injuries: 15.11, 13
Hemorrhagic Fever, Viral: 31.5–6
Hematuria: 18.1, 6, 9
HemCon: 6.7–8
Hemostasis, of liver wounds,
Hemorrhage Control: 17.11
Hemorrhagic FEVERS: 31.5
Hemothorax: 16.3
Hemotympanium: 13.19
Heparin, in Vascular Repair: 27.6
Hepatic Failure: 11.13
Hepatic Veins, Hemorrhage: 17.12
Hetastarch: 7.3, 5
High Altitude Cerebral Edema (HACE): 29.31–33
High Altitude Pulmonary Edema (HEPE): 29.29–31
Hip: 24.5–6

Hip Spica, low: 23.5–6
Hoffmann II: 23.10
Hospitals, see chapter 2
Hospital Company 84-Bed, 164-Bed: 2.7–8
Hospital Ship (TAH): 2.9
Hospital Unit-Base (HUB)/Hospital Unit-Surgical (HUS): 2.7
Humerus: 23.8

Hydration
heat: 29.12
overhydration: 29.12

Hydrogen Cyanide: 32.4
Hypaque: 18.2

Hypercarbia
CNS trauma: 11.4; 15.7
permissive: 11.7

Hyperglycemia: 11.5, 14
Hyperkalemia
burn injury: 9.3, 28–11
crush injury: 22.7
heat stroke: 29.17
ICU: 11.11

Hypertension
intracranial: 11.4; 15.10–11
systemic: 9.5

Hyperthermia
avoidance: 11.5
radiological injury: 30.5

Hypertonic Saline: 7.3, 5; 11.3

Hypothermia
grades: 29.7–8
in treatment of head injuries: 15.10
treatment: 29.8–11
systemic: 29.7–11

Hysterectomy: 19.3–5

Ibuprofen
altitude illness: 29.26
cold injury: 29.6

ICU Care
cardiovascular system: 11.7–9
diabetic system: 11.14
evacuation: 11.15
gastrointestinal system: 11.12–13
hematologic system: 11.12
immune system: 11.14
musculoskeletal system: 11.15
pulmonary system: 11.5–7
renal system: 11.9–12
shock resuscitation: 11.2–3
traumatic brain injury: 11.3–4
Imipenem: 10.8, 10
Immersion Foot, see Trench Foot
Immobilization, see Extremity Fractures
Immunization, Against Tetanus: 10.4, 6
Infection
antibiotic coverage for war wounds: 10.5
antibiotic dosage: 10.10
diagnosis of wound infection: 10.1
intraabdominal: 10.8
microorganisms: 10.2
patterns of infection: 10.2–3
pulmonary: 10.8
soft tissue: 10.6–8
splenectomy: 17.13
systemic sepsis: 10.9–10
tetanus: 10.4, 6
treatment: 10.3–4
Inhalation Injury: 28.2
Improvised Explosive Device: 1.7
Impact Uni-Vent Eagle: 11.6
Insulin, use in ICU: 11.14
International Quarantinable Disease (IQD): 31.4
Intraocular Contents, Prolaps, see Open Globe
Intracranial Pressure: 15.8–10
Intracranial Ventricular Catheter: 15.8–9
Intracranial Ventricular Infusion: 8.4
Intubation
rapid sequence for adults: 5.3; 9.5
rapid sequence for children: 33.6
direct laryngoscopy: 5.3–5
endotracheal: 5.10; 9.5
indications: 9.1; 11.5–6
nasotracheal: 5.8
Isoflurane: 9.7
Jejunostomy: 17.10
Joint Injuries
aspiration: 24.2–3
closed: 24.1
infection: 24.5
open: 24.1–9
surgical approach: 24.5
Keratitis: 14.5
Ketamine
anesthesia: 9.3, 7
burns: 28.7
Kidney: 18.1–5
Killed in Action, definition: A3.2
Kinetic Energy of Missile: 1.10
Knee
aspiration: 24.3
surgical approach: 24.4
Kocher Approach: 24.7
Kocher Maneuver: 17.9, 15
Laminecotomy: 20.2, 9
Landmines
antipersonnel: 1.6
antitanks: 1.11
Laparotomy
epidemiology: 3.9
indications: 17.2
indications, at FST, at CSH: 17.2
Laryngeal Mask Airway (LMA): 5.7–8
Laryngoscopy: 5.3–5
Larynx, injuries: 13.14–16
Laser Eye Injuries: 14.12–13
Lateral Canthotomy/Cantholysis: 14.8–9
Le Fort Fractures: 13.7–9
Levels of Medical Care
Level I: 2.1
Level II: 2.2
Level III: 2.6
Level IV: 2.9
Level V: 2.10
Levoburolol: 14.7
Lewsite: 32.3
Lid Laceration: 14.10–12
Lidocaine (2% with 1:100,000 epinephrine): 14.8
Ligation: 27.8
Lenzolid: 10.10
Internal Jugular Venipuncture: 8.2
Litter, in spine injuries: 20.7
Liver Injuries: 17.11–12
Local Anesthetic Agents: 9.9
Log Role: 20.5
Long Leg Cast: 23.7–8
Lumbar Spine: 20.8
Lung Injuries: 16.12
Lymphocyte/Granulocyte Levels Following Radiation: 30.4
M-16A1/M16A2: 1.8
M-291 Kit: 32.2
Macintosh Blade: 5.3
Mannitol
brain injuries: 11.4
crush injury: 22.8
eye injuries: 14.7
Mafenide acetate: 28.7
Mandibular Fractures: 13.3–5
Mannitol, in head injuries: 15.10
Marine Corps, Levels of Care: 2.5
Maxillary Fracture: 13.6–9
Maxillofacial Wounds, Reconstruction: 13.10
Mechanisms of Injury
ballistic: 1.3, 12
blast: 1.4, 12
thermal: 1.4, 12
Meconium: 19.15
Median Sternotomy: 16.9
Medic, Combat: 2.1
Medical Attendants, in Air Evacuation, see CCATT
Medical Evacuation (MEDEVAC): 4.1
Medical Evacuation Precedence: 4.5–6
Methergine: 19.14
Methylprednisolone, in Spinal Cord Injury: 20.9
Midazolam: 9.7
Metronidazole: 10.6, 8
Miliaria Rubra: 29.20–21
Miliaria Profunda: 29.20–21
Military Antishock Trouser (MAST): 6.4
Miller Blade: 5.3
Minimal Alveolar Concentration (MAC) (Halothane, Sevoflurane, Isoflurane, Enflurane, Nitrous Oxide): 9.7
Missiles, see chapter 1
Mobile Field Surgical Team (MFST): 2.3
MOPP Gear
in heat: 29.13
chemical injury: 32.1
Mortality
burns: 28.1
damage control surgery: 12.1
radiological injury: 30.3–4
Multiple Injuries, with head injuries: 15.3
Muscle Relaxants
depolarizing: 9.3
nondepolarizing: 9.3
Mustard
chemical injury: 32.3
treatment of eye injuries gas: 14.4
Mydriacil: 14.5
Myocardial Ischemia/Infarction: 11.9
Myoglobinuria: 11.10; 28.11
crush syndrome: 22.7
electrical injury: 28.11
heat stroke: 29.14, 17
Naloxone, in Neonatal Resuscitation: 19.15
Naso-Orbito-Ethmoid Fracture: 13.3
Nasolacrimal Duct: 14.12
NATO, rifle cartridge 7.62mm: 1.8–9
Navy, Levels of Care: 2.4, 2.8–9
Neck
anatomy: 13.12
zone: 13.12
surgical principles: 13.14
vertebral artery injury: 13.15
intraoral injury: 13.15
internal carotid: 13.15
internal jugular vein: 13.16
laryngotracheal: 13.16
trachea: 13.17
esophageal: 13.17
Neostigmine: 9.7
Nephrectomy, Kidney Wounds: 18.3–4
Nephrostomy: 18.5
Neonatal Resuscitation: 19.15
Nerve Agents
chemical injury: 32.2–3
eye: 14.4
Nerves, Contraindication to Repair: 22.4
Neuraxial Anesthesia: 9.9
Neurogenic Shock: 7.2; 20.10
Nifedipine, in HAPE: 29.31
Nitroprusside: 9.5
Nitrous Oxide: 9.7
Norepinephrine: 11.3
Nose, fractures: 13.5–6
Nursing Care, Prevention of Decubitus Ulcers: 20.10
Nutrition, in ICU: 11.13
Obstetrical/Obstetric Emergencies: 19.8–14
Ocuflox (ophthalmic drops): 14.5
Ocular Injuries
anterior segment injuries: 14.3–7
chemical injury: 14.3–4
corneal abrasions/ulcer: 14.4–5
hemorrhage: 14.7–8
hyphema: 14.7
foreign bodies: 14.6
identifying: 14.1–2
open globe: 14.2–3
retrobulbar/orbital floor fracture: 14.9–10
subconjunctival hemorrhage: 14.3
Ohmeda Portable Anesthesia Complete (PAC): 9.9–11
Oliguria, in renal failure: 11.9
Omnipaque: 18.2
Op-Site: 28.14
Open Joint Injuries
acetabulum in pelvic fractures: 21.3
anterior iliofemoral approach: 24.6
aspiration/injection: 24.2
hip: 24.5–8
operative treatment: 24.2–4
posterior/Kocher approach: 24.7–8
shoulder: 24.8–9

Open Pneumothorax: 16.4
Optiray: 18.2
Ophthalmia, Sympathetic: 14.13
Orbit
blowout fracture: 14.9
hemorrhage: 14.7
Oropharyngeal Intubation: 5.4–6
Osmolarity: 11.4
Otologic Blast Injury: 13.19–20
Oxygen, supplemental: 11.5
Oxygen Tension
aeromedical evacuation: 4.4
critical care: 11.7
head injury: 15.7
Oxytocin
postpartum: 19.13
Uterine atony: 19.14
Ovarian Cyst: 19.6
Ovarian Torsion: 19.7
Ovaries: 19.6–7
Packing, Abdomen: 12.4–5
Pain, Control in ICU: 11.2
Pancreatic Duct: 17.11
Pancreas Injuries: 17.10–11, 14
Pancreaticoduodenectomy: 17.9, 11
Pancuronium: 9.3
Parachute Injuries: 1.14–15
Parotid Duct Injury: 13.11
Patching, Eye Injuries: 14.2
Patient Movement Requirement Center (PMRC): 4.7
Pediatric Care
burns: 33.3
cardiovascular: 33.2–3
drug/dosage: 33.7
fluid requirements: 33.1
gastrointestinal: 33.3
hematology: 33.4
intubation: 33.6
pulmonary: 33.2
Pelvic Fractures
acetabular fracture: 21.3
associated visceral injuries: 21.2–3
blunt: 21.1
characteristics of penetrating wounds: 21.3
external fixation: 21.3–4
hemorrhage control: 21.2
Pelvic, Wounds Associated with Hip Joint Injury: 21.3
Pelvis, Drainage: 17.15
Penicillin
in tetanus: 10.6
in necrotizing soft tissue infection: 10.7
Pernio: 29.2
Penis, Wounds: 18.12
Pericardial Tamponade: 16.3
Pericardial Window: 16.7–9
Pericardiocentesis: 16.3
Peripheral Nerves: 22.4
Peritoneal Lavage, diagnostic (DPL): 17.7
Perirectal Space: 17.15
Peritonitis: 10.8
Permanent Cavity: 1.3
Phenergan: 14.3
Phenobarbital: 9.4
Phenylephrine: 11.3; 20.10
Phenytoin: 11.5
Phlebotomy: 7.6–8
Phosgene: 32.4
Phosphorus, White: 28.11–12
Physostigmine: 32.5
Plague: 31.2, 3, 5
Plaster Casts: 23.4–7
Platysma: 13.13
Pneumothorax
open: 16.4
surgical management: 16.4–6
tension: 16.1, 3
Polysporin, in eye injuries: 14.3
Popliteal Artery: 27.4–5
Position of Function, Hand: 26.4
Positive End-Expiratory Pressure (PEEP): 9.6; 11.6
Posterolateral Thoracotomy: 16.12
Potassium, see Hypo/Hyperkalemia
Potassium Iodine, in Radiological Injury: 30.6
Pralidoxime Chloride (2-PAMCl): 32.2
Precautions, Biological Weapons, Standard/Droplet: 31.4
Prednisolone, Ophthalmic: 14.4, 7
Pregnancy: 19.8–14
Preload: 11.8
Presacral Drainage: 17.15
Pressure
abdominal compartment syndrome: 12.7
cerebral perfusion: 11.3–4
intracranial: 11.4
mean arterial (MAP): 11.4
intraocular: 14.7
Pressure Points for Hemorrhage Control: 6.3
Index

Pressurization of Aircraft: 4.4
Primary Injury of the Brain: 15.4
Pringle Maneuver: 17.11
Prochlorperazine, in Altitude Illness: 29.26
Proctoscopy: 17.14
Propofol: 9.4
Proptosis: 14.2
Protein Requirements: in ICU: 11.13
Prussian Blue, in Radiological Injury: 30.6
Pretreatment with Pyridostigmine Bromide: 32.3
Pseudomonas Antibiotic Therapy, see chapter 11
Psoas Hitch: 18.6–7
PTFE Graft: 27.7
Pulmonary Infection: 10.8–9
Pulmonary Insufficiency
  critical care: 11.5–7
  pediatrics: 33.2
Pulmonary Tractotomy: 12.6; 16.13
Pulse After Arterial Repair: 27.9
Pulse, in Shock: 7.1–2
Pupils: 14.2; 15.6
Pyelography, Intravenous: 18.9
Pylorus, Ligation: 17.10
Pyrexia, see chapters 10 and 11
Q-Fever: 31.5
Quik Clot: 6.7–8
Radial Artery: 6.3
Radiation Dispersal Device (Dirty Bomb): 30.1
Radiation, Lethal Dose: 30.3
Radiological Injury
  combined injuries: 30.5–6
  decontamination: 30.6
  introduction: 30.1–2
  logistics: 30.6–7
  potential injuries: 30.4–5
  signs and symptoms: 30.3
  triage: 30.2–3
Rhabdomyolysis: 28.11
  crush syndrome: 22.6
  heat stroke: 29.14, 17
Rapid Sequence Intubation (RSI): 5.3; 9.5
Rectal Injuries: 17.14–15
Rectovaginal Septum, Repair: 19.11
Rectum: 17.14–15; 19.4
Regional Anesthesia: 9.8–9
Renal Dialysis, in Crush Injury: 22.7
Renal Failure: 11.9–12
Renal Injuries: 18.1–5
Renografin: 18.2
Reoperative Abdominal Surgery: 12.8–9
Reseption, of small intestine: 17–13
Respirator, in Air Evacuation: see chapter 22
Respiratory Complications Due to Nerve Agents: 32.2
Respiratory Irritation, see chapter 32
Respiratory Obstruction, Emergency Care, see chapter 5
Respiratory Restriction, Escharotomy: 28.3
Resuscitation, see chapter 7
  organization of facility: 3.13
Resuscitative Thoracotomy: 16.6–7
Retinal Injuries: 14.12
  radiological injury: 30.5
Retroperitoneal Injuries: 17.15–16; 18.1, 3, 6; 19.7
Rewarming
  cold injured parts: 29.5–6
  hypothermia: 29.9–10
Rib Fractures: 16.4; 17.4; 18.1
Ricin: 31.5
Rifle, Bullets, see chapter 1
Rift-Valley Fever: 31.5
Rine Test: 13.19–20
Rocuronium: 9.4
Role of Medical Care, see Levels
Round Ligament: 19.5
Roux-en-Y: 17.9–16
RPG-7: 1.10
Rule of Nines
  adult: 28.4
  child: 33.3
Sacrum
  decubitus ulcers: 20.10
  presacral drains: 17.15
Saphenous Vein: 8.3–4; 27.7
Salpingectomy: 19.5
Scalp, Laceration: 15.3
Sciatic Nerve: 24.7
Scopolamine, ophthalmic drops: 14.4; 4, 7
Scrotum, Wounds: 18.12
Secondary Injury of the Brain: 15.4, 7
Seizure, Prophylaxis: 11.5
Seldinger Technique: 8.2–3
Sepsis, see chapters 10 and 11
Septic Shock: 7.2
Sevoflurane: 9.7
Shock and Resuscitation
  clinical correlates of hypovolemic shock: 7.2
  colloids: 7.5
  concept of controlled resuscitation: 7.4
  fluids for resuscitation: 7.5
  recognition and classification of...
Shock: 7.1–2
resuscitation: 11.2–3
transfusion therapy: 7.6–12
treatment of traumatic shock: 7.2–4
walking blood bank: 7.6–8
Shock Trauma Platoon: 2.2
Shock Wave
in ballistic injury: 1.3
in blast: 1.3–4
Shunts: 27.6
Shoulder
aspiration: 24.3
splinting: 24.8
surgery: 24.8–9
Sildenafil, Use in High Altitude Exposure: 29.24
Silver Sulfadiazine: 28.7
Skeletal Traction: 23.19–20
Skin Grafts, Burns: 28.12–15
Skull
basilar fracture: 13.18
scalp: 15.3
skull: 15.3, 6
Skull Base, Temporal Bone and Otologic Injury: 13.18–20
Small Bowel Injuries: 17.13
Small Intestine: 17.13
Small Portable Expeditionary Aeromedical Rapid Response (SPEARR) team: 2.4
Smallpox: 31.2, 5
Sodium, Fractional Excretion (FENA): 11.10
Sodium Bicarbonate: 11.10
Sodium Nitrite/Thiosulfate: 32.5
Soft Tissue Injuries
care after initial surgery: 22.5–6
compartment syndrome: 22.9–10
crush syndrome: 22.6–8
debridement: 22.2–4
face: 13.9
fasciotomy technique: 22.10–14
primary wound care: 22.2–5
presurgical care: 22.1
priorities: 22.1–2
Sonography, see Ultrasound
Sorting, see chapter 3
Spall: 1.10
Spica Cast: 25.6–8
Spinal Column and Cord Injuries
classification: 20.2–3
corticosteroids for closed spine injuries: 20.9
evergent surgery for penetrating spine injuries: 20.9
Gardner-Wells tongs: 20.6–8
head injuries: 15.7
instability: 20.3–4
management principles: 20.10
pathophysiology: 20.2
patient transport/extrication: 20.2–5
stability: 20.2
treatment: 20.9
Splenic Injury: 17.11, 13
Splints, Extremities: 28.15
Staphylococci: see chapter 10
Steinmann Pins: 23.19
Sternotomy: 16.9
Steroids
contraindication in traumatic brain injury: 11.4
injuries of the spine: 20.9
trauma: 11.15
treatment of toxic fumes: 1.13
Stomach: 17.9
Streptococcal in Necrotizing Soft Tissue Infection: 10.6
Stress
triage: 3.4
in medical personnel: 3.7
Stryker Frame: 20.8
Subclavian Vein Venepuncture: 8.1–2
Subconjunctival Hemorrhage: 14.3
Subxiphoid Pericardial Window: 16.7–8
Succinylcholine: 5.3; 9.3
contraindication: 9.3
malignant hyperthermia: 9.3
Sucking Chest Wounds: 16.4
Sulfadiazine: 28.7
Sulfamylon: 28.7–8, 15
Supplies, Triage and Resuscitation Facility, see chapter 2
Surgical Company: 2.5
Surgicel: 17.12
Symes Amputation: 25.4
Synovium: 24.4
Systemic Inflammatory Response (SIRS) disease: 11.2
Tactical Abbreviated Surgical Control (TACS): 12.1
Tanks, Crew Injuries: 1.9
Temazepam, in Altitude Insomnia: 29.27
Temporary Cavity: 1.3, 7–8
Tendons, Contraindication to Repair: 22.4
Tension Pneumothorax: 5.3
Testicles: 18.13
Tetanus Immune Globulin: 10.6
Tetanus Toxoid: 14.3
cold injury: 29.6
tetanus-prone wounds: 10.6
Thermal Injury: 1.4
in nuclear detonation: 30.1–2
Thermobaric Weapon: 1.4
Thickening Agents: 32.5
Thigh, Compartments and Fasciotomy: 22.11
Thiopental: 9.4
Thoracic Injuries
  evaluation and diagnosis: 16.2
  diaphragm: 16.15
  esophagus: 16.14–15
  heart: 16.12
  lungs: 16.12–13
  thoracic damage control: 12.6
  tracheobronchial tree: 16.14
Thoracic Spine: 20.8
Thoracoabdominal Injuries: 16.11
Thoracostomy: 16.4
Tibia: 23.13–17
Tidal Volume: 9.6; 11.6
Timolol Ophthalmic: 14.7
Tinnitus: 13.19
Toe Injuries: 26.6
Tooth
  fragments 13.1
  removal 13.4
Topical Antimicrobials, see chapter 28
Total Intravenous Anesthesia: 9.7
Tourniquet: 6.3–4
Toxic Fumes, in Damaged AFV: 1.13
Tracheal Injury: 13.16
Tracheobronchial Injury: 16.14
  in burns: 28.2
Traction
  cranial tongs: 20.6
  skeletal: 23.19–20
  skin: 25.5
Transfusion Therapy: 7.6
  massive: 7.8–9
Transfusion Reactions
  management: 7.7
  Rh blood group and females: 7.7–8
Trauma Record
  data collection: A3.4–7
  died of wounds: A3.2
  killed in action: A3.2
Trenchfoot: 29.2–3
Triage
  alternate triage categories (emergent, nonemergent, expectant): 3.3
  categories (immediate, delayed, minimal, expectant): 3.2
  combat stress: 3.4
  decision making: 3.8
  radiation injury: 30.2–3
  resource constraints: 3.5–7
  setup, staffing and operations of triage system: 3.9–14
  tips: 3.14–15
  triage decision making: 3.7
Triazolam, in Altitude Insomnia: 29.27
Trismus, in Tetanus: 10.4
Trunk, Circumferential Burns: 28.3
Tube Thoracostomy 16.4
Tularemia: 31.5
Tympanic Membrane, Injuries: 13.19
Ultrasound
  abdominal: 17.3
  duplex: 27.2
Unexploded Ordnance: 1.13–14
Uranium, depleted: 1.10
Ureter: 18.6–9
Ureteronecystostomy: 18.8
Ureteroureterostomy: 18.7–8
Urethra
  injuries: 18.10–12
  pelvic fracture: 21.2
Urethral Stricture: 18–12
Urethrography: 18.10–11
Urinary Diversion: 18.4, 6
Urine
  characteristics in crush injury: 22.7
  characteristics in renal failure: 11.9–12
Uterine Hemorrhage
  atony: 19.13
  indication for C-section: 19.11
  postpartum: 19.13–14
Uterus, Injuries: 19.3
Vacuum wound closure system: 22.14
Vagina
  hematoma: 19.3
  injuries: 19.2–3
  mass: 19.8
  precipitous delivery: 19.9
Vancomycin: 10.10
Valium, Heat Stroke: 29.16
Vascular Access
  interosseous infusion: 8.4
  techniques subclavian vein/internal jugular/greater saphenous: 8.1–4
Vascular Injuries
  complications: 27.8–9
  compartment syndrome: 22.9–14; 26.2, 6–8
  evaluation and diagnosis: 27.1–2
  hemorrhage control: 27.3
  management: 27.3–8
  postoperative management: 27.8–9
  repair: 27.6–7, 10; 13.2
  shunts: 27.6
Vasoconstrictors, in Distributive Shock: 7.2
Vasopressors
  dobutamine: 11.3
Emergency War Surgery

ephedrine: 9.5
norepinephrine: 11.3
neosynephrine: 9.5
phenylephrine: 11.3
shock: 11.3
Vecuronium: 9.3, 7
Vein Grafts: 27.7
Veins
greater saphenous: 8.3–4
internal jugular: 8.1; 13.15
repair: 27.8
subclavian access: 8.1
Velpeau Dressing: 23.8–9
Vena Cava, Intrahepatic, Hemorrhage: 17.12
Venezuelan Equine Encephalitis (VEE): 31.5–6
Ventilation
bag valve mask: 5.2
hyperventilation: 11.4
indications: 11.5–6
mechanical in ARDS: 11.7
positive pressure: 5.3
Ventilator
field: 9.10; 11.6
Impact Uni-Vent Eagle: 9.10; 11.6
rate: 11.6
Ventricular Fibrillation, hypothermia: 29.9–10
Vecuronium: 9.3
Versed: 9.7
Vertebral
artery: 13.14
column: 20.3
fracture and renal injury: 18.1
Vesicants: 32.3
Viagra, see Sildenafil
Vibro Cholera, see Cholera
Viral Agents: 31.5–6
Visual Acuity, Evaluation: 14.1
Vomiting, Radiation Injury: 30.6
Volume, tidal: 9.6; 11.6
Vulva
hematoma: 19.2
injuries: 19.1
Walking Blood Bank: 7.9–11
Work-Rest Cycles, in Heat/FM21-10/
MCRP 4-11.1D: 29.12
Weapons Effects
antiarmor: 1.9
antiarmored weapons: 1.9–13
antipersonnel mines: 1.6–7
blast: 1.4
distribution of penetrating wounds: 1.2
epidemiology: 1.1–2
grenade: 1.1
landmines: 1.1, 6
mechanism of injury: 1.2
missiles: 1.2–5
shaped charge: 1.9
specific small arms: 1.7–9
thermal: 1.4, 12
unexploded ordnance: 1.13–14
Weather, Role in Cold Injury: 29.7
Webril: 23.6, 8
Wound Ballistics, see chapter 1
Wound
closure: 22.5–6
radiation injury: 30.5
soft tissue: 22.2–5
vacuum wound closure system: 22.14
Wound Data and Munitions Effectiveness
Team (WDMET) Casualty Data: 1.1
Wounds/Injuries
anatomical distribution: 1.2; 3.9
decontamination: 32.6
location, antitank mine: 1.8
management in radiological injury: 30.5
parachute: 1.15; 30.5
Wrist Block: 9.8
Xeroform Gauze: 28.14
Yaw: 1.5
Zosyn (Piperacillin and Tazobactam): 10.10