
Table of contents

Volume 1

Front section

List of figures and images i
 List of tables vii
 ACEM procedure list x

ACEM curriculum descriptors and learning objectives xi
 Abbreviations xiv

Resuscitation

Chapter 1

Life support

International resuscitation guidelines 2010 1
 Cardiac arrest 1
 Basic life support 2

Advanced cardiac life support 6
 Post arrest care 9

Chapter 2

Organisation of resuscitation

Resuscitation teams 14
 Patient relatives and resuscitation 15

Assessment of physiological disturbance 15
 Physiological monitoring 16

Chapter 3

Airway management

Anaesthetic equipment 22
 Bag mask ventilation 23
 Induction agents 25
 Inhalational anaesthetic agents 29
 Neuromuscular physiology 30
 Neuromuscular blockade 31
 Suxamethonium 31
 Non depolarising neuromuscular blocking agents 32
 Intubation equipment 33
 Endotracheal intubation 36
 Difficult intubation 40
 Difficult intubation equipment 41

Post intubation care 45
 Endotracheal extubation 46
 Other airway techniques 47
 Surgical airway techniques 48
 Paediatric airway management 50
 Airway management in trauma 52
 Airway management in obesity 53
 Airway management in critical hypoxia or poisoning 54
 Anaesthetic risk 55
 Malignant hyperthermia 55
 Procedural sedation 57

Chapter 4

Respiratory management

Introduction 60
 Oxygen therapy 61
 Continuous positive airway pressure (CPAP) 64

Non invasive ventilation 64
 Ventilation 66
 Ventilation in special circumstances 71

Chapter 5

Cardiac arrhythmias

Introduction 72
 Ventricular arrhythmias 75
 Sudden cardiac death 79
 Assessment of atrial fibrillation or flutter 81
 Atrial fibrillation / flutter arrhythmia management 83
 Stroke prevention in atrial fibrillation / flutter 88
 Supraventricular tachycardia 91
 Carotid sinus massage 96

Other arrhythmias 97
 Bradycardias 100
 Anti-arrhythmic drugs 103
 Electrical cardioversion 106
 Pacemakers 109
 Complications of pacemakers 114
 Syncope 118

Chapter 6

Circulatory assessment and management

Peripheral intravenous access 121
Intravenous cannulae 121
Peripheral intravenous access sites 122
Peripheral intravenous catheter insertion technique 123
Difficult intravenous access 125
Central venous access 128
Central venous access technique 130
Central venous pressure (CVP) measurement 132
PICC lines 132
Arterial access 133
Intravenous fluids 135
Pathophysiology of shock 138
Types of shock 139
Assessment of shock 140
Management of shock 141
Assessment of intravascular volume 144
Treatment of hypovolaemia 146
Transfusion therapy 149
Complications of transfusion 150

Special blood products 153
Packed cell transfusion 153
Clotting factor replacement 154
Platelet transfusion 156
Adjuncts to transfusion therapy 157
Assessment of sepsis 157
Management of sepsis 160
Cardiac output measurement 162
Inotropes and pressor agents 165
Mechanical cardiovascular support 168
Hypertension 171
Drugs for hypertensive emergencies 172
Other anti-hypertensive agents 174
Diuretics 174
Drugs acting on the renin-angiotensin system 175
Beta blockers 177
Calcium channel antagonists 178
Centrally acting agents and vasodilators 179

Chapter 7

Brain injury management

Intracranial pressure 182
Assessment of intracranial pressure 182
Imaging features of raised intracranial pressure 183

Cerebral reperfusion injury 184
Prevention of secondary brain injury 185

Chapter 8

Paediatric resuscitation

Paediatric cardiac arrest 188
Paediatric resuscitation 189
Paediatric vascular access 191

Paediatric trauma 191
Neonatal resuscitation 192

Chapter 9

Analgesia

Acute pain management 195
Opioids 197
Non steroidal anti-inflammatory drugs (NSAIDs) 199
Chronic pain 201

Local anaesthesia 201
Regional anaesthesia 203
Intravenous regional anaesthesia 206

Clinical practice skills

Chapter 10

Patient safety

Patient safety 209
Clinical decision making 214
Communication 217
The medical record 221

Discharge planning 223
Violence 225
Domestic violence 229

Chapter 11

Professional skills

Personal skills 231
Leadership 234
Supervision 235
Teamwork 238
Committees 240
Conflict management 242

Clinical skills 244
Professionalism 247
Medical education 248
Structured educational sessions 250
Educational techniques 252
International medical graduates 252

Examination preparation 253

Chapter 12

Culture

Culture 256

Aboriginal and Torres Strait Islander health 260

Chapter 13

Special patients and situations

Aging 264

Obesity 267

Complementary medicine 269

Patients who did not wait 271

Consent 272

Refusal of treatment 275

Frequent attenders to the ED 277

Drug seeking behaviour 277

Special status patients 278

The health care professional as patients or relatives 279

Health care of prisoners 281

Media interactions 282

Determining the extent of medical treatment 284

Palliative care 285

Bereavement 287

Coroners acts 292

Chapter 14

Cardiac investigations

Electrocardiography 293

Cardiac axis 296

Disorders of cardiac conduction 297

The ECG and abnormal cardiac chambers 300

Ion effects on the ECG 300

Echocardiography 303

Other cardiac investigations 306

Chapter 15

Medical imaging

General approach to medical imaging 308

Computerised tomography 309

Radiation and diagnostic imaging 311

Ultrasonography 313

Nuclear medicine 316

Magnetic resonance imaging 318

Intravenous contrast 319

Chapter 16

Clinical biochemistry

Specimen collection 321

Interpretation of investigation results 322

Assessment of test performance 323

Test turnaround time 326

The approach to blood gas analysis 326

Blood gas analysis 327

Acid-base disorders 329

Acidosis 330

Metabolic acidosis 331

Respiratory acidosis 335

Alkalosis 336

Sodium 338

Hyponatraemia 339

Hypernatraemia 343

Chloride 344

Potassium 345

Hypokalaemia 345

Hyperkalaemia 348

Urea & creatinine 350

Calcium 351

Hypercalcaemia 353

Hypocalcaemia 355

Magnesium 356

Hypomagnesaemia 356

Hypermagnesaemia 357

Phosphate 358

Hypophosphataemia 358

Hyperphosphataemia 360

Liver function tests 360

Serum proteins 364

Chapter 17

Haematological investigations

Haemoglobin 366

White blood cells 366

Platelets 368

The blood film 368

Other investigations 369

Coagulation testing 370

Chapter 18

Clinical pharmacology

Pharmacological principles 373

Pharmacodynamics 374

Pharmacokinetics 376

Drug metabolism 377

Drug dosing & administration 380
Drug interactions 383

Adverse drug reactions 385
Drugs in sport 386

Research skills

Chapter 19

Analysing medical literature

The medical literature 389
The scientific paper 391

Sections of a scientific paper 393
Analysis of the medical literature 396

Chapter 20

Study design

Research projects 399
Ethics of research 399
Experimental design 400

Enrolment and randomisation 403
Outcome measures 405
Trial registration 406

Chapter 21

Data and statistics

Statistical definitions 407
Data collection 407
Data description 409
Data display 412
Probability 413

Measures of association 414
Statistical power 415
Inferential statistics 416
Comparison of variables between groups 417
Correlations between variables 420

Management

Chapter 22

Clinical systems management

Emergency medicine 423
Emergency department management 425
Triage 427
Emergency department design 431
Short stay medicine 433
Information systems 434
Clinical practice guidelines 436

Quality improvement 437
Clinical indicators 439
Emergency department overcrowding 440
Time limited ED care targets 443
Patient satisfaction 446
Financial issues 450

Chapter 23

Staff management

Performance management 456
Work stress 457

Rosters 459
ED staffing 460

Chapter 24

Medicolegal medicine

Medicolegal issues 462
Medicolegal reports 464

Court appearances 465

Chest pain and cardiovascular disorders

Chapter 25

Non ACS chest pain

Evaluation of chest pain 467
Pulmonary embolism (PE) 467
Investigations in PE - non imaging 472
Investigation in PE - imaging 474
Management of PE 479

PE in special populations 482
Non thrombotic embolism 484
Thoracic aortic dissection 485
Pericarditis 489

Oesophageal causes of chest pain 492

Chapter 26

Acute coronary syndromes (ACS)

Clinical assessment of suspected ACS 495
 The ECG in acute coronary syndromes 496
 Cardiac biomarkers in ACS 505
 Troponins in ACS 505
 Non ACS causes of elevated troponins 507
 Other cardiac biomarkers 508
 Other diagnostic modalities in ACS 509
 Coronary artery disease 511
 Definition of AMI 513
 Complications of AMI 514

Risk stratification in suspected ACS 515
 Management of acute coronary syndromes 519
 Acute reperfusion therapy of AMI 523
 Selection of reperfusion therapy in AMI 525
 Acute angioplasty (PCTA) 526
 Thrombolytic therapy of AMI 527
 Thrombolytic agents 528
 Delays to reperfusion 530
 Prognostic factors in AMI 531
 Cardiovascular risk reduction 532

Chapter 27

Structural heart disease

Cardiovascular examination 535
 Cardiac auscultation 537
 Aortic stenosis 539
 Aortic regurgitation 542
 Mitral stenosis 543
 Mitral regurgitation 544
 Tricuspid & pulmonary valve lesions 545
 Prosthetic heart valves 546
 Cardiac murmur differentiation 550

Endocarditis 551
 Congenital heart disease 554
 Acyanotic lesions with left to right shunt 555
 Other congenital cardiovascular abnormalities 558
 Cyanotic congenital heart disease 561
 Pulmonary hypertension 563
 Cardiac tumours 564
 Cardiac transplantation 566

Chapter 28

Cardiac failure

Determinates of cardiac output 568
 Cardiac failure 569
 Cardiomyopathy 570

Assessment of cardiac failure 571
 Management of cardiac failure 576

Chapter 29

Pericardial & myocardial disease

Pericardial tamponade 578
 Acute myocarditis 581

Rheumatic fever 582

Chapter 30

Vascular emergencies

Peripheral ischaemia 585
 Arterial occlusion 586
 Gangrene 587
 Thromboangiitis obliterans 587
 Takayasu's arteritis 588

Thoracic outlet syndrome 589
 Popliteal aneurysms 590
 Mycotic aneurysms 590
 Vascular complications of IV drug use 590
 Complications of angiography 591

Chapter 31

Venous disease

Varicose veins 593

Oedema 593

Volume 2

Respiratory disorders

Chapter 32

Respiratory assessment

Respiratory examination 595
Chest imaging 598
The paediatric chest X-ray 601
Diffuse pulmonary opacity 602

Pulmonary masses 606
Pulmonary fibrosis 608
Mediastinal masses 610
Respiratory function tests 611

Chapter 33

Respiratory disease

Shortness of breath 613
Asthma 613
Assessment of asthma 614
Acute asthma management 616
Bronchodilator agents 619
Management of life threatening asthma 622
Long term asthma management 624
Chronic obstructive pulmonary disease 625
Assessment of COPD 626
Management of COPD 628
Bronchiectasis 631
Home oxygen therapy 632

Tracheobronchial foreign bodies in children 633
Haemoptysis 634
Carcinoma of the lung 635
Sleep apnoea syndrome 638
Bronchitis 639
Community acquired pneumonia (CAP) 639
Infectious agents causing CAP 641
Pneumonia scoring systems 644
Management of CAP 646
Pulmonary aspiration 648
Acute respiratory distress syndrome 650

Chapter 34

Pleural diseases

Abnormal intrathoracic gas 652
Assessment of pneumothorax 655
Management of pneumothorax 658

Pleural effusion 664
Parapneumonic effusion & empyema 667

Abdominal disorders

Chapter 35

General gastroenterology

Examination of the abdomen and GIT 669
Antiemetics 675
Perianal problems 676

Rectal foreign bodies 678
Gastrointestinal devices 679

Chapter 36

Abdominal pain

Assessment of abdominal pain 681
Ultrasound of the bowel 683
Causes of abdominal pain 684
Uncommon causes of abdominal pain 687
Appendicitis 688
Bowel obstruction 693
Nasogastric tube insertion 698
Hernias 699
Infective gastroenteritis 701
Alcoholic ketoacidosis 704

Abdominal aortic aneurysm 705
Other abdominal aneurysms 709
Mesenteric ischaemia 709
Peptic ulcer disease 711
Pancreatitis 715
Biliary disease 718
Cholecystitis 720
Diverticular disease 722
Inflammatory bowel disease 723
Irritable bowel syndrome 725

Chapter 37

GIT haemorrhage

Upper GI haemorrhage 726

Lower intestinal haemorrhage 729

Chapter 38

Liver disease

Hepatic diseases 731

Ascites 734

Spontaneous bacterial peritonitis (SBP) 736

Jaundice 738

Infectious hepatitis 738

Reye's syndrome 742

Acute liver failure 742

Hepatic tumours 743

Chapter 39

GIT tumours

Gastric carcinoma 745

Pancreatic carcinoma 745

Colonic carcinoma 746

Carcinoid 747

Chapter 40

Dysphagia

Dysphagia 749

Gastrointestinal foreign bodies 751

Neurological disorders

Chapter 41

Neurological assessment

Assessment of cognition 753

Assessment of speech 753

Cerebral lobe function 754

Cerebellar function 756

Contents of skull foramina 758

Cranial nerve examination 759

Assessment of olfactory function 760

Assessment of vision 760

Pupillary abnormalities 762

Abnormal eye movements 764

Assessment of trigeminal nerve function 766

Assessment of facial weakness 767

Vertigo 769

Assessment of hearing 772

Assessment of lower cranial nerve function 772

Peripheral nervous system examination 774

Brain death 779

The head CT 781

Neurological investigations 783

Nerves of the upper limb 784

Nerves of the lower limb 787

Chapter 42

Stroke

Cerebrovascular disease 790

Stroke 793

Stroke syndromes 794

Intracerebral haemorrhage 795

Stroke assessment tools 796

Investigation of stroke 798

Stroke management 802

Thrombolytic therapy in stroke 805

Carotid and vertebral artery dissection 810

Chapter 43

Headache

Headache 813

Primary headaches 813

Secondary headaches 814

Subarachnoid haemorrhage 815

Investigation of suspected SAH 818

Management of aneurysmal SAH 820

Meningitis 822

Encephalitis 826

Lumbar puncture 827

Intracranial hypotension 830

Migraine 831

Idiopathic intracranial hypertension 834

Hydrocephalus 835

Cerebral venous sinus thrombosis 838

Cerebral tumours 839

Cerebral ventricular shunts 842

Chapter 44

Seizures

Seizures 846

Assessment of isolated seizures 848

Management of isolated seizures 850

Status epilepticus 851

Anti-convulsants for immediate seizure control 852

Anti-convulsants for seizure prevention 853

Chapter 45

Altered mental state

Altered mental state 858

Coma and altered conscious state 859

Neuroleptic malignant syndrome 862

Chapter 46

Weakness

Non traumatic spinal cord disorders 864

Multiple sclerosis 867

Neuropathies and myopathies 869

Guillain barré syndrome 869

Botulism 871

Diphtheria 871

Tetanus 872

Myasthenia gravis 873

Eaton Lambert syndrome 874

Polymyositis 874

Muscular dystrophies 874

Metabolic paralysis 875

Motor neurone disease 876

Polio 876

Chapter 47

General neurology

Parkinson's disease 877

Other movement disorders 878

Peripheral neuropathy 879

Phakomatoses 880

Endocrinology

Chapter 48

Diabetic emergencies

Diabetes mellitus 883

Insulin therapy 884

Other hypoglycaemic agents 885

Chronic care and complications of diabetes 887

Hypoglycaemia 889

The diabetic patient with unstable blood sugars 890

Diabetic ketoacidosis 891

Hyperglycaemic hyperosmolar state 893

Chapter 49

Other endocrine disorders

Adrenal insufficiency 895

Cushing's syndrome 897

Pituitary insufficiency 899

The Thyroid 900

Hyperthyroidism 901

Thyroid storm 902

Hypothyroidism 903

Breast lumps 905

Breast carcinoma 906

Anabolic steroids 907

Infectious disorders

Chapter 50

General infectious diseases

Non-infective fevers 909

Bacterial cultures 909

Cytomegalovirus infection 911

Epstein-Barr virus infection 912

Toxoplasmosis 913

Infective gastroenteritis 914

Cryptococcal disease 915

Chapter 51

Infection control

Epidemiology of infectious disease 917

Infection control 918

Drug resistant Staph aureus 921

Immunisation 922

Available vaccines 922

Australian immunisation schedule 925

New zealand immunisation schedule 926

Disinfection 926

Body fluid exposure 927

Notifiable diseases 930

Chapter 52

Antimicrobials

Principles of antibiotic therapy 931
Penicillins and beta-lactams 932
Aminoglycosides 934
Macrolides 935
Tetracyclines 936
Sulphonamides and fluoroquinolones 936

Chapter 53

Respiratory infections

Tuberculosis 943
Influenza 944

Chapter 54

Skin and soft tissue infections

Cellulitis 949
Gas gangrene & necrotising fasciitis 952

Chapter 55

Sexually transmitted diseases

STD presentations 958
Gonorrhoea 958
Chlamydial infections 959

Chapter 56

The febrile traveller

The febrile traveller 967
Malaria 968
Traveller's diarrhoea 971
Salmonella disease 971
Dengue fever 973

Chapter 57

Infections from animals

Hydatid disease 980
Q fever 981

Chapter 58

Biological warfare agents

Biological warfare agents 985
Anthrax 985
Plague 987
Smallpox 988

Anaerobic cover 937
MRSA cover 937
Other antimicrobials 938
Outpatient antibiotic therapy 938
Antiviral drugs 939

Respiratory Coronavirus infections 946

Herpes simplex 953
Varicella-zoster infections 955

Syphilis 960
HIV infection 961

Ross river fever 974
Meliodosis 975
Rickettsial disease 975
Parasitic diseases 976
Other viral infections 978

Brucellosis 982
Rabies 983

Tularemia 989
Botulism 990
Viral haemorrhagic fevers 992

Paediatrics

Chapter 59

General paediatrics

Assessment of children 995
Assessment of adolescents 996
Physiological and anatomic differences in children 997
The limping child 999
Paediatric malignancy 1000

Non accidental injury 1002
Sudden infant death syndrome 1004
Attention deficit disorder 1005
Intellectual disability 1005

Autism 1007

Chapter 60

Infections in children

The febrile child 1009
Measles 1012
Rubella 1013
Varicella / Chickenpox 1014
Mumps 1014
Infectious mononucleosis 1015
Erythema infectiosum 1015
Roseola infantum 1016

Hand foot and mouth disease 1016
Gianotti-Crosti syndrome 1016
Scarlet fever 1017
Urinary tract infection in children 1017
Paediatric meningitis 1019
Meningococcal disease 1021
Other inflammatory conditions 1022

Chapter 61

Respiratory disease in children

Wheeze in childhood 1025
Bronchiolitis 1025
Croup 1028

Pertussis / parapertussis 1029
Paediatric pneumonia 1031
Cystic fibrosis 1032

Chapter 62

Abdominal disease in children

Paediatric gastroenteritis 1034
Paediatric abdominal conditions 1036

Foreign body ingestion 1039

Chapter 63

Neonatal problems

Neonatal problems 1041
Neonatal jaundice 1041
Neonatal fever and sepsis 1042

The crying baby and failure to thrive 1043
Neonatal skin disorders 1044
Neonatal cardiovascular problems 1045

Mental health

Chapter 64

Mental health in the ED

Emergency mental health services 1047
Evaluation 1049

Medical clearance in mental illness 1051
Mental health legislation 1052

Chapter 65

Mental health disorders

Classification of psychiatric illness 1054
Affective disorders 1055
Self harm 1057
Suicide risk 1058
Bipolar disorder 1059
Antidepressant medications 1061

Psychosis 1063
Antipsychotic medications 1065
Anxiety disorders 1068
Torture & trauma 1069
Somatoform disorders 1070
Eating disorders 1072

Obstetrics and gynaecology

Chapter 66

Gynaecology

Gynaecological examination 1075
Abnormal vaginal bleeding 1076
Other genital infections 1079
Gynaecological disorders 1081

Ovarian hyperstimulation syndrome 1083
Sexual assault 1084
Contraception 1085

Menopause 1087

Chapter 67

Pelvic pain

Miscarriage 1088
 Dysfunctional uterine bleeding 1088
 Ectopic pregnancy 1089
 Pelvic inflammatory disease 1091

Dysmenorrhoea 1093
 Ovarian cysts 1094
 Endometriosis 1095

Chapter 68

Obstetrics

Pregnancy 1097
 Termination of pregnancy 1099
 Changes in pregnancy 1100
 Hyperemesis gravidarum 1102
 Antepartum haemorrhage 1102
 Hypertension in pregnancy 1104
 Premature labour 1108
 Normal labour & delivery 1109
 Electronic monitoring of labour 1111

Abnormal presentations 1112
 Amniotic fluid embolism 1113
 Other complications of labour 1114
 Post-partum haemorrhage 1114
 The normal puerperium 1116
 Rh Isoimmunisation 1117
 Drugs in pregnancy and lactation 1119
 Radiation in pregnancy and lactation 1121
 Trauma in pregnancy 1122

Urogenital disorders

Chapter 69

Urinary disorders

Kidney ureter and bladder anatomy 1125
 Urinalysis 1125
 Other diagnostic procedures 1127
 Loin pain 1128
 Macroscopic haematuria 1130

Renal calculi 1131
 Urinary tract infection in adults 1134
 Prostatitis 1136
 Urinary retention 1137
 Urinary catheterisation 1138

Chapter 70

Genitourinary disorders

Scrotal emergencies 1142
 Paraphimosis and phimosis 1145
 Priapism 1146

Other urogenital problems 1147
 Benign prostatic hypertrophy 1148
 Prostatic carcinoma 1149

Chapter 71

Renal disease

Nephrotic & nephritic syndromes 1151
 Glomerulonephritis: Nephritic presentation 1151
 Glomerulonephritis: Nephrotic presentation 1152
 Polycystic kidney disease 1153
 Renal tumours 1155
 Bladder tumours 1156
 Other renal abnormalities 1157
 Acute kidney injury 1158

Chronic kidney disease 1160
 Peritoneal dialysis 1161
 Haemodialysis 1162
 Haemofiltration 1163
 Extracorporeal vascular access 1164
 Renovascular problems 1164
 Renal transplantation 1165

Volume 3

Haematological disorders

Chapter 72

Anaemia

Anaemia 1167
Microcytic anaemia 1168
Macrocytic anaemia 1170
Normochromic anaemia 1172

Haemolytic anaemia 1173
Haemoglobinopathies 1175
HbS - Sickle cell disease 1175
Other haemoglobinopathies 1178

Chapter 73

Abnormal haemostasis

Normal haemostasis 1180
Petechiae 1183
Thrombocytosis 1184
Thrombocytopenia 1185
Idiopathic thrombocytopenic purpura (ITP) 1186

Thrombotic microangiopathies 1187
Qualitative platelet defects 1189
Disorders of clotting 1190
Haemophilia 1191
Disseminated intravascular coagulation 1193

Chapter 74

Venous thrombosis

Thrombophilia 1195
Superficial thrombophlebitis 1197
Deep venous thrombosis 1198
Upper limb venous thrombosis 1204
Heparin 1205

Warfarin 1207
Managing warfarin therapy 1209
Reversal of anti-coagulation 1210
Other anticoagulants 1212
Vena caval filters 1214

Chapter 75

Oncology

Bone marrow 1216
Leukaemia 1216
Multiple myeloma 1219
Myeloproliferative disorders 1221
Myelodysplastic syndromes 1222

Lymphadenopathy 1222
Lymphoma 1223
Febrile neutropenia 1225
Other oncologic emergencies 1227
Bone marrow transplantation 1229

Immune function disorders

Chapter 76

Hypersensitivity

Hypersensitivity reactions 1231
Hay fever 1232
Anaphylaxis 1232
Specific allergens 1236

Immunological investigations 1237
Immune complex disease 1238
Polyarteritis nodosa 1239

Chapter 77

Immunomodulating therapies

Immunosuppressants 1241
Interferons 1244

Immune globulin therapy 1245
Plasmapheresis 1246

Chapter 78

Other disorders of immunity

Angioedema 1247
Mastocytosis 1248
Systemic lupus erythematosus 1249
Sarcoidosis 1251
Wegener's granulomatosis 1252

Other autoimmune inflammatory diseases 1253
Amyloidosis 1255
Thymoma 1256
Immunodeficiency 1257

Soft tissue disorders

Chapter 79

Connective tissue disorders

Scleroderma 1259

Mixed connective tissue disease 1260

Ehlers Danlos syndrome 1261

Marfan's syndrome 1261

Chapter 80

Inflammatory myopathies

Polymyalgia rheumatica 1263

Giant cell arteritis 1263

Polymyositis & dermatomyositis 1264

Environmental disorders

Chapter 81

Bites and stings

First aid measures 1267

Australian antivenoms 1268

Insect envenomations 1268

Ticks 1270

Lepidopterism 1271

Redback and Funnel web spider bites 1273

Other spider bites 1276

Snakes 1278

Snake bite 1279

Assessment of snake bite 1281

Management of snake bite 1284

Chapter 82

Marine injuries and illnesses

Jellyfish envenomation 1289

Other marine envenomations 1292

Toxic marine ingestions 1296

Drowning 1297

Diving medicine 1301

Problems of descent 1302

Problems of ascent 1303

Chapter 83

Environmental injury

Hypothermia 1307

Assessment of hypothermia 1308

Management of hypothermia 1309

Frostbite 1312

Heat related illness 1312

Heat stroke 1313

Other heat related illness 1317

Exercise induced illness 1318

High altitude medicine 1319

High altitude illness 1320

Other altitude illness 1321

Chapter 84

Electrical injuries

Electrical injury 1324

Lightning injury 1327

Skin disorders

Chapter 85

Rashes

General dermatology 1331

Emergency dermatology 1333

Blistering and vesicular rashes 1334

Blistering rashes 1334

Pemphigoid and pemphigus 1336

Skin infections 1337

Cellulitis mimics 1338

Pruritus 1338

Patchy scaly red rashes 1339

Scabies and head lice 1342

Tinea 1343

Lyme disease 1345

Chapter 86

Other skin disorders

Leg ulcers 1347

Skin tumours 1348

Melanoma 1350

Head & neck disorders

Chapter 87

Ear disorders

ENT examination 1353

Ear diseases 1354

Diseases of the external ear 1356

Diseases of the inner ear 1358

Chapter 88

Other ENT disorders

Acute sinusitis 1359

Laryngeal anatomy 1361

Sore throat 1362

Other oropharyngeal conditions 1366

Rhinitis 1366

Epistaxis 1367

Ingested foreign bodies 1370

Stridor 1372

Oral conditions 1373

Chapter 89

Faciomaxillary disorders

Carcinoma of the head and neck 1374

Salivary gland diseases 1374

Dental emergencies 1376

Odontogenic pain 1377

Submandibular infection 1379

Conditions of the head and neck 1380

Eye disorders

Chapter 90

Ocular assessment and trauma

Ocular examination 1383

Ophthalmic medications and treatments 1387

Ocular trauma 1388

Chapter 91

Other ocular disorders

The red eye 1393

Diseases of the eyelid and orbit 1394

Acute visual loss 1396

Acute angle closure glaucoma 1399

Out of hospital care

Chapter 92

Prehospital care

Emergency medical systems 1401

Efficacy of prehospital interventions 1401

Chapter 93

Disaster medicine

Disaster medicine 1404

Counter disaster planning 1405

Hospital disaster plan 1406

On site management of mass casualties 1407

Emergency department response to disasters 1409

Critical resource failure 1411

Surge 1411

Chapter 94

Interhospital care

Interhospital transfer 1414

Patient preparation for transport 1415

Helicopter safety 1417

Trauma

Chapter 95

Principles of trauma

Epidemiology of trauma 1421

Trauma teams 1423

Trauma systems 1424

Psychological aspects of trauma care 1425

Patterns of injury 1426

Assessment of the trauma patient 1427

Management of the trauma patient 1429

Trauma scoring systems 1432

Chapter 96

Head trauma

Introduction 1434

Complications of head trauma 1435

Extradural and subdural haematoma 1438

Investigation of blunt head trauma 1440

Paediatric head trauma 1444

Management of head trauma 1445

Emergency craniotomy 1447

Head injury prognosis 1448

Hanging 1450

Chapter 97

Facial trauma

Faciomaxillary trauma 1452

Nasal trauma 1453

Mandibular trauma 1454

Zygomatico-maxillary trauma 1456

Dental trauma 1458

Intraoral lacerations 1460

Ear trauma 1460

Chapter 98

Neck and spinal trauma

Cerebrovascular trauma 1462

Cervical spine manipulation 1463

Laryngotracheal trauma 1463

Spinal immobilisation 1464

Cervical spine injuries 1465

Cervical spine fractures 1471

Thoracolumbar injuries 1474

Spinal cord injury 1476

Chapter 99

Thoracic trauma

Chest trauma 1481

Chest wall injuries 1481

Pulmonary injuries 1483

Mediastinal injuries 1487

Diaphragmatic injuries 1490

Chapter 100

Abdominal and pelvic trauma

Assessment of abdominal trauma 1492

Management of blunt abdominal trauma 1494

Splenic trauma 1495

Liver trauma 1497

Bowel injuries 1498

Other retroperitoneal injuries 1499

Urogenital trauma 1500

Pelvic trauma 1504

Assessment of pelvic trauma 1507

Management of pelvic trauma 1508

Chapter 101

Penetrating trauma

Non gunshot penetrating trauma 1511

Penetrating head trauma 1512

Penetrating neck trauma 1512

Penetrating thoracic trauma 1514

Resuscitative thoracotomy 1516

Penetrating trauma to the trunk 1519

Penetrating trauma to the limbs 1520
Brachial plexus injuries 1522
Nerve injuries 1523

Chapter 102

Hand trauma

Hand anatomy 1530
Hand injuries 1531
Digital amputations 1532

Chapter 103

Other mechanisms of injury

Crush injury 1538
Compartment syndrome 1539

Chapter 104

Burns

Burns 1542
Burn wounds 1546

Chapter 105

Wound management

Classification of wounds 1552
Wound management 1552
Sutures 1555

Missile injuries 1525
Specific missile injuries 1528

Nail injuries 1533
Tendon sheath infections and pressure gun injuries 1535
Bite injuries 1536

Radiation injury 1540

Chemical burns 1549

Tissue adhesives, tapes and dressings 1557
Subcutaneous foreign bodies 1559

Bone and joint disorders

Chapter 106

General orthopaedics

Anatomic principles 1561
Osteomyelitis 1562
Paediatric orthopaedic conditions 1564
Osteoporosis 1566

Paget's disease 1566
Complex regional pain syndrome 1567
Bone tumours 1568
Soft tissue sarcomas 1569

Chapter 107

Acute joint disorders

Assessment of joints 1571
Arthritis 1571
Monoarthritis 1572
Arthrocentesis 1572
Gout and pseudogout 1573

Septic arthritis 1575
Other causes of monoarthritis 1576
Bursitis 1577
Neck pain 1578
Low back pain 1579

Chapter 108

Chronic arthritis

Osteoarthritis 1582
Rheumatoid arthritis 1583
Reynaud's phenomenon 1586

Sjögren's syndrome 1587
Seronegative arthritis 1587

Chapter 109

Principles of bone and joint trauma

Assessment of fractures & dislocations 1592
Assessment of the severely injured limb 1594
Management of fractures & dislocations 1595

Casting techniques 1597
Splintage technique and procedures 1599
Fracture mimics 1599

Fractures with names 1600

Chapter 110

Lower limb injuries

Hip joint 1601
 Dislocations of the hip 1601
 Femoral fractures 1603
 Knee joint 1607
 Knee dislocations 1609
 Knee and leg fractures 1610
 Ligament and cartilage injuries of the knee 1613

Soft tissue injuries around the knee 1615
 Ankle joint 1615
 Ankle injuries 1617
 Talar and calcaneal fractures 1620
 Foot fractures 1622
 Soft tissue injuries of the ankle and foot 1625

Chapter 111

Upper limb injuries

Shoulder joint 1627
 Glenohumeral joint dislocations 1628
 Anterior shoulder dislocation management 1631
 Shoulder and arm region injuries 1633
 Soft tissue injuries of the shoulder region 1638
 Elbow injuries 1639

Forearm injuries 1644
 Wrist joint 1645
 Dislocations around the wrist 1646
 Distal forearm injuries 1647
 Hand injuries 1651

Toxicology

Chapter 112

Principles of toxicology

Epidemiology of poisoning 1655
 Risk assessment in poisoning 1656
 Toxidromes 1658
 Sodium channel blocking agents 1660
 Potassium channel blocking agents 1661
 Poisoning by unknown substances 1662
 Management of poisoning 1663

Drug induced seizures 1664
 Activated charcoal 1665
 Other methods of GIT decontamination 1666
 Extracorporeal elimination of toxic compounds 1668
 Analytical toxicology 1670
 Illicit drug use 1673

Chapter 113

Smoking and alcohols

Smoking 1676
 Smoking cessation 1677
 Ethanol 1679
 Alcohol withdrawal 1683
 Management of alcoholism 1684

Osmolality 1685
 Ethylene glycol 1686
 Methanol 1688
 Other toxic alcohols 1690

Chapter 114

Analgesic toxicity

Paracetamol 1692
 Salicylates 1697

Nonsteroidal anti-inflammatory drugs 1699

Chapter 115

Sedatives & muscarinic antagonists

Benzodiazepines 1702
 Other sedative hypnotics 1703

Anti-muscarinic agents 1705
 Anti-histamines 1706

Chapter 116

Drugs of abuse

Sympathomimetics 1709
 Other drugs of abuse 1711
 Cocaine 1712

Opioid agonists 1714
 Opioid antagonists & partial agonists 1717

Clonidine 1719

Chapter 117

Antidepressant & antipsychotic toxicity

Antidepressant toxicity 1720

Monoamine oxidase inhibitors 1724

Serotonin toxicity 1724

Antipsychotic agents 1726

Chapter 118

Cardiac medications

Beta-blockers 1729

Calcium channel antagonists 1730

Digoxin 1732

Chapter 119

Other therapeutic drug toxicity

Anti-convulsant toxicity 1735

Antibiotic toxicity 1736

Chloroquine 1738

Quinine 1739

Isoniazid 1739

Xanthines 1741

Gout medications 1742

Vitamin toxicity 1744

Ergot alkaloids 1745

Chapter 120

Toxic plants

Poisonous plants 1746

Mushrooms 1747

Chapter 121

Chemical agents

Corrosives 1750

Organophosphates 1752

Other insecticides 1756

Hydrocarbons 1757

Terpines 1760

Essential oils 1761

Paraquat 1762

Other herbicides 1764

Strychnine 1764

Cyanide 1765

Met-haemoglobinaemia 1766

Chapter 122

Toxic gases

Carbon monoxide 1768

Other toxic inhalations 1770

Capsicum spray 1773

Chapter 123

Toxic metals

Iron 1775

Lithium 1777

Arsenic 1778

Lead 1779

Mercury 1781

Chelating agents 1783

Non ferrous metals 1785

Index

Appendix

SI unit conversion table

Paediatric resuscitation chart