

# INDEX

## A

- A Severity Characterisation Of Trauma (ASCOT), 167, 168-169
- Abbreviated Injury Scale (AIS), 164, 170
- ABCDEs of resuscitation, 172, 178, 200, 215, 225
- ABCs of life support, 172-173, 177, 180, 195, 225, 330, 644, 729
- Abdominal trauma, 184-189
  - and acute pancreatitis, 494
  - in birth, 229-230
  - blunt, 184-187, 200
  - penetrating, 187
  - secondary survey, 176-177
  - and traumatic asphyxia, 180
  - and urogenital trauma, 200
- Abdominal wall defects, 747. *See also*  
Exomphalos; Gastroschisis; Omphalocele
- Abscesses, 36, 94-96
  - abdominal, 95, 124
  - amoebic liver, 96, 141-142, 144, 148-149, 627
  - anorectal, 465-466
  - appendix, 122, 440
  - bacterial infection, 92
  - biliary, 769
  - bone, 666
  - from bowel lengthening, 427
  - brain, 325
  - branchial arch, 235
  - cerebral, 193
  - draining, 92-96, 108, 122-123, 430, 446, 758
  - with empyema, 300
  - hepatic, 103, 125
  - in Hirschsprung's disease, 452-453
  - incisional, 98-100
  - with inflammatory bowel disease, 443-444
  - intraabdominal, 95, 115, 122, 125, 360, 391, 420, 441, 774
  - intraperitoneal, 107-108, 126, 433
  - intrathoracic, 329
  - liver, 96, 124, 141, 353, 627
  - lung, 115, 287, 289, 299, 304-305
  - with lymphadenitis, 240-241
  - with lymphangiomas, 650-651
  - mesenteric, 113
  - muscle, 120-122
  - in necrotising fasciitis, 130-131
  - and omphalitis, 125-126
  - orbital, 758
  - with osteomyelitis, 135-136, 138
  - pancreatic, 103
  - postoperative, 362, 716, 739
  - psoas, 96, 362
  - with pyomyositis, 93, 120-122
  - respiratory tract, 329
  - retropharyngeal, 279-281, 762
  - soft tissue, 666
  - splenic, 103, 500
  - in surgical wound, 362
  - testicular, 592
  - thyroglossal, 238
  - thyroid, 263-264
  - tonsillar, 760
  - tuberculosis, 96, 113, 115, 627
  - and typhoid fever, 104-105, 107
  - urachal, 584
- Achalasia, 304, 319-321, 740
  - of cardia, 31, 429
  - sphincter, 452
- Acquired immune deficiency syndrome.  
*See* AIDS.
- Acute chest syndrome, 37, 490
- Acute Physiology and Chronic Health Evaluation (CHASE) scale, 165, 167
- Adenocarcinoma, 311, 313, 316, 354, 497
- Adenoma, 262
  - hepatic, 623-624, 626-628
  - pleomorphic, 254, 257-259
  - thyroid, 238, 266-267
- Adhesion intestinal obstruction, and typhoid fever, 108
- Adrenal gland, 229-231, 575, 609
- Advanced Trauma Life Support (ATLS), 172, 209, 215
- Aerodigestive foreign bodies, 329-331
- Aeromonas*, 120
- Aganglionosis
  - intestinal, 388, 427, 437
  - with Hirschsprung's disease, 448-452
- Agnesis, 255
- Agricultural injuries, 159-161
- AIDS, 151-153
  - antiretroviral therapy, 78-79, 117, 151, 225-226, 256
  - Bangui definition of, 152
  - combatting via telemedicine, 777
  - death rate, 73
  - ethics related to, 78, 630
  - with Kaposi sarcoma, 613, 619, 626
  - prevalence of, 3, 129, 613
  - privacy issues, 79
  - role in other diagnoses, 599, 605
  - in sexual assault cases, 225
  - See also* HIV.
- Air-fluid levels, 114, 143, 148, 300-301, 304, 319, 386, 390, 407, 413
- Airway
  - collapse, 14, 283-284, 308
  - compression, 260, 265, 272-274, 339, 649, 651
  - intubation, 55, 58, 251, 275-276, 504, 603, 761
  - maintenance, 9, 12, 57-58, 72, 172-173, 177
  - oedema, 10, 16, 215, 275
  - physiology, 14, 55, 67-68, 287
  - pressure, 15, 59, 68-69, 293
- Airway management, 15, 20, 55-57, 67-70, 72, 172-173, 177, 644, 760-762
  - in burn injuries, 215
  - in conjoined twins, 751
  - and craniocerebral trauma, 191, 194
  - and mediastinal masses, 340-341
  - and reconstructive surgery, 727-729
  - and spinal cord injury, 195
  - and urogenital tract injuries, 200
- Airway obstruction, 57-60, 67, 277-281
  - and corrosive ingestion, 324
  - and foreign bodies, 274, 329-331
  - and haemangiomas, 657
  - and infection, 93, 651
  - and lymphadenopathy, 244-245
  - and lymphangiomas, 649-654
  - nasal, 757-759
  - and recurrent respiratory papillomatosis, 762
  - and stridor, 273
  - and thoracic trauma, 180
  - and tracheomalacia, 283-285
  - and trauma, 168-169, 172, 175, 177
  - and tuberculosis, 116, 118
- Alagille syndrome, 472-474, 477, 630, 766
- Alpha-fetoprotein, 364, 601, 622, 746-748
- Amides, 59
- Amniotic fluid, 8, 10, 14, 349, 351, 386, 584, 747, 749
- Amoebiasis, 141-142, 299
- Amoebic colitis, 142
- Amoebic liver abscess, 96, 141-142, 144, 148-149, 627
- Amputation
  - limb, 93, 158, 209-212, 220, 618, 634-637, 667, 696, 713, 727
  - lips or nose, 731
  - penis or glans, 206, 556, 557, 561
- Anaesthesia, 55-60
  - assessment of hypospadias under, 546
  - for circumcision, 555
  - difficulties with administration of, 251
  - in management of status epilepticus, 71
  - for pain, 10, 60, 64, 361, 467, 555, 558
  - in separation of conjoined twins, 752
- Analgia, for pain, 10, 37-38, 59, 63-64, 71-72, 174, 176, 180, 256, 466-467, 532, 555
- Analgesic ladder, 63
- Anastomosis, and typhoid fever, 108
- Anatomical differences, children versus adults, 55-56
- Anatomical Profile, 164, 165
- Androgen, 465, 541-542, 569, 572-578
- Aneurysm
  - carotid artery, 241
  - femoral, 362
  - intracranial, 194
  - posttraumatic, 194
  - ventricular, 182
- Angiography, 47, 194, 202, 373, 504-505, 585, 640, 661-662, 666, 751-753, 769
- Angiosarcoma, 619-621, 624, 626, 633, 725
- Annular pancreas, 376, 381-382, 491-495
- Anorectal abscess, 465-466
- Anorectal anomaly, 306, 349, 376, 429, 433, 529, 673, 680
- Anorectal injury, 187-188, 189, 200, 465-469
- Anorectal malformation, 47, 204, 376-379, 437, 455-460, 601, 673, 679, 740, 748
  - as a causative factor, 437, 451
  - surgical technique, 379, 457-459
  - treatment, 84, 456-457
- Anorectal varices, 503, 504
- Anorectoplasty, 21, 200, 379, 457-460, 741
- Anorectum, 187, 377, 528. *See also* *Anorectal entries*.
- Antibiotics
  - for anorectal conditions, 466, 468
  - for appendectomy, 441
  - for bacterial tracheitis, 281
  - for biliary atresia, 478-479, 481
  - for bladder disorders, 532, 587
  - for burns, 218, 221
  - for cholangitis, 481, 484
  - for empyema thoracis, 301, 302
  - for haematogenous osteomyelitis, 136-138, 140
  - for Hirschsprung's disease, 451, 453
  - for hypospadias, 546
  - indiscriminate use of, 299
  - for intussusception, 408
  - for lymphangiomas, 653-654
  - in minimal access surgery, 740
  - for necrotising fasciitis, 93-94, 130-132, 418-420
  - for omphalitis, 125-126, 353
  - for open fractures, 212, 713, 721
  - for osteomyelitis, 667, 712
  - in otorhinolaryngology, 76, 758
  - for pancreatitis, 494
  - for peptic ulcer disease, 373-375

- Antibiotics (*continued*)  
 for peritonitis, 126  
 for pneumonia, 299, 301  
 prophylactic, 16, 100, 217, 219, 221, 279, 334, 378, 420, 502, 521, 525  
 for pyomyositis, 93, 120-123  
 for reconstructive surgery, 730, 732, 733  
 for septic arthritis, 139  
 for shunt infection, 702-703  
 for spina bifida, 702  
 for splenic disorders, 500-502  
 for typhoid fever, 104, 107-109  
 for urinary tract infection, 514, 516, 520
- Antireflux procedures, 320, 326, 522, 530, 584, 762
- Antireflux surgery, 284-285, 530, 532, 533. *See also* Fundoplication.
- Antireflux valve, 478, 479
- Antiretroviral therapy, for AIDS, 78-79, 117, 151, 225-226, 256
- Antitubercular drugs, 116
- Anus  
 in bladder exstrophy, 529  
 in conjoined twins, 752-753  
 Hartmann's pouch, 430, 433  
 imperforate, 21, 204, 376-379, 385, 390, 455, 491, 529, 673-674, 697, 704, 741. *See also* Anorectal anomaly, Anorectal malformation.  
 in sexual assault, 225, 467  
 in pull-through procedure, 379, 446, 449, 451, 452-453, 461, 741  
 VATER, 24, 727
- Anxiety, of patients and families, 82-83, 85-87
- Aortopexy, 284-286, 740
- Aplasia, 255
- Appendectomy, 79, 98-99, 129, 311, 390, 395, 396, 409, 440-441, 743
- Appendicitis, 35, 95-96, 390, 409, 440-442, 495, 686, 690-691, 743  
 acute, 113, 393, 440-442, 489  
 perforated, 106, 441, 739, 743
- Appendicostomy, 459, 704
- Appendix, 361, 379, 440-442  
 abscessed, 122, 140  
 displaced, 407  
 embryology, 143, 389  
 inflamed, 362, 390  
 perforated, 47, 95, 390, 440-441, 739  
 ruptured, 412  
 subhepatic, 393  
 tuberculosis, 112-113
- Arnold-Chiari malformation, 250, 761. *See also* Chiari II malformation.
- Arterial access, 47-48
- Arterial bleeding, in peptic ulcer disease, 374
- Arterial blood gases, 9-10, 47, 59, 217, 293, 418
- Arterial blood supply, 10, 335, 404, 713
- Arterial cannulation, 48-49
- Arterial ligation, 760
- Arterial malformations, 665, 726. *See also* Arteriovenous malformations.
- Arterial obstruction, 440, 590
- Arterial occlusion, 43, 662
- Arterial oxygen concentration, 9, 47, 59
- Arterial phase, liver tumours, 623, 628
- Arterial pressure, 59, 70, 191
- Arterial punctures, for vascular access, 48
- Arterial resistance, 18
- Arterial thrombosis, 209
- Arteriovascular shunt, 661
- Arteriovenous connection, 660-662
- Arteriovenous fistula, 661, 665
- Arteriovenous malformations, 202, 657, 660-663, 665, 726
- Arteriovenous shunt, 77, 289, 660, 726
- Ascariasis, 142-144, 494
- Ascaris lumbricoides*, 141-143, 404, 414
- Ascitic fluid, 115
- Asepsis, 100-101
- Aspergillus* sp., 756, 759, 770
- Aspergillus flavus*, 759
- Asphyxia, 24, 26, 28, 180, 279, 335, 416
- Assault, 159, 190, 223, 225-226
- Astrocytoma, 639-645
- Asynchronous telemedicine, 778
- Atelectasis  
 due to aerodigestive foreign bodies, 331  
 as complication of chest tuberculosis, 118  
 as evidence of tuberculosis, 114  
 following liver resection, 629  
 and pectus carinatum, 332  
 pulmonary, 112, 340  
 in neurologically impaired children, 315  
 risk of, 10, 14, 15, 62, 142, 340
- Atresia, 349, 351, 376-379  
 auditory canal, 757  
 biliary, 96, 472-474, 476-481, 484-485, 499, 625-626, 630, 766-768, 771, 775  
 bowel, 47, 348, 351, 424, 438, 740, 747, 748  
 bronchial, 288, 747  
 choanal, 277-278, 727, 748, 757  
 colonic, 402, 437-438  
 distal, 378  
 duodenal, 306-307, 376-379, 381-384, 390, 394, 484, 748  
 intestinal, 4-5, 31, 376, 385-388, 394, 397, 412, 418, 427, 742, 747  
 jejunoileal, 376, 378-379, 394  
 laryngeal, 288  
 with meconium ileus, 402  
 neonatal intestinal obstruction, 377  
 oesophageal, 5, 72, 276, 283, 285, 286, 306-311, 329, 342, 390, 491, 741, 748  
 thoracic duct, 342  
 in transplantation, 766  
 urethral, 582  
 uterine canal, 757  
 uteroperelvic, 510  
 vaginal, 573, 582, 672-675, 683
- Auditory brainstem response, 756
- Autonomic dysreflexia, 21, 197
- Autotransplantation, 203, 263, 267
- B**
- Bacille Calmette-Guérin virus  
 and lymphadenopathy, 242, 246, 247  
 tuberculosis vaccine, 96, 113, 118, 242, 247
- Bacilli  
 acid-fast, 96, 113-114, 465  
 fusiform, 730  
 gram-negative enteric, 466  
 tuberculosis, 111, 113
- Bacillus cereus*, 730
- Bacterial infection, 71, 92-97, 299-301, 416-417, 730  
 in burns, 218, 219  
 in cholestasis, 472  
 coinfection with parasitic infection, 142, 144-145  
 in empyema, 301  
 in lymphadenopathy, 241  
 in lymphangioma, 649, 651  
 in necrotising enterocolitis, 416-417  
 in noma, 730  
 in operative procedures, 99  
 in pancreatitis, 494
- Bacterial infection (*continued*)  
 posttransplantation, 770, 772  
 in pyomyositis, 120-123  
 in tracheitis, 279, 281  
 in tuberculosis, 112, 114, 115  
 in umbilical cord, 124  
 in wounds, 209, 219  
*See also specific bacteria.*
- Bacterial overgrowth, 379, 387, 424, 426-427, 430, 440
- Bacteroides, 93, 94, 96, 130
- Bacteroides fragilis*, 124, 130, 730
- Bacteroides* sp., 241
- Bag-mask ventilation, 68-69
- Barrett's oesophagus, 308, 311-313, 315-316
- Bartonella henselae*, 242
- BCG. *See* Bacille Calmette-Guérin virus.
- Bezoars, 355, 412-415
- Bile ducts, 472-473, 476, 478-479, 487, 753, 766, 770
- Bilharziasis, 145, 200, 582. *See also* Schistosomiasis.
- Biliary atresia, 96, 472-474, 476-481, 484-485, 499, 625-626, 630, 766-768, 771, 775
- Biliary dyskinesia, 489
- Biliary obstruction, 126, 472-474, 481, 483, 766
- Biliary reflux, 484-485
- Birth injuries, 190, 228-231
- Bite injuries, 159
- Bladder  
 abdominal teratoma, 603  
 anomalies, 529, 533  
 blunt trauma, 203-204  
 carcinomas, 146  
 catheter placement, 16, 22, 28, 174, 176-177, 201, 204-205, 408, 418, 457-458, 539, 549  
 closure, 530-532, 535-536  
 complications with spinal cord injury, 196-197  
 in conjoined twins, 753  
 distended, 184, 187, 196-197, 200, 204, 562, 686  
 diverticulum, 354  
 duplications, 399, 518, 520  
 embryology, 672-673  
 exstrophy, 348-349, 352, 355, 359, 467, 528-536, 565  
 incomplete emptying, 25  
 keyhole, 538  
 neurogenic, 704-705  
 normal function, 582, 704  
 outlet compression, 583  
 outlet obstruction, 518-520, 521, 535, 562, 581-588, 615, 704, 749  
 parasitic infestation, 145-146  
 perforation, 672  
 repair, 531-532, 533-536  
 rupture, 200, 201  
 stone formation, 565-566, 583  
 tumours, 615  
 ureterocolices, 518-519, 521-522.  
 and urethral valves, 538-540  
 vesicoureteric reflex. *See* Vesicoureteric reflux.  
 volume, 530, 532-533, 535, 536, 586
- Bladder injury, 201-202, 203-204, 362, 556-557, 704  
 in abdominal trauma, 184, 187  
 with spina bifida, 565, 704  
 with ureteral injury, 203, 204  
 with urogenital trauma, 200-201
- Bladder neck  
 abnormalities, 518, 520, 528, 582-583  
 contracture, 587  
 fibrosis, 584, 587  
 injury, 203-205

- Bladder neck (*continued*)  
 reconstruction, 530, 532-533, 536, 705  
 repair, 530, 533-536, 582, 705  
 tumour, 615
- Blastomyces*, 771
- Blister  
 from burn, 215, 219  
 caused by parasite, 144  
 in corrosive oesophageal burns, 324  
 in impetigo, 92  
 in necrotising fasciitis, 131  
 with noma, 730  
 with pressure ulcer, 733
- Blood, cerebral flow, 190-191
- Blood, loss during surgery, 27-28
- Blood pressure, related to age, 18
- Blood volume, circulating, 35, 59
- Boils, 92, 130, 147, 465
- Bone puncture, for vascular access, 48, 53
- Bone tumours, 633-638
- Bonesetter, 158, 210, 211-212, 709
- Bonesetter's gangrene, 208, 210, 212
- Borrelia vincenti*, 730
- Bowel atresia, 47, 348, 351, 424, 438, 740, 747, 748
- Bowel obstruction, 26, 28, 29, 376, 440, 746, 758  
 with atresia, 385-386  
 with bowel-lengthening procedures, 427  
 distal, 437  
 with internal hernias, 394  
 with intussusception, 389, 462-463  
 with lymphoma, 605  
 with meconium ileus, 401-403  
 with parasitic infestation, 149  
 with peritoneal adhesions, 412-415  
 postoperative complications, 446, 501, 689, 774  
 with stenosis, 432-433  
 with tuberculosis, 113  
*See also* Intestinal obstruction.
- Brachial artery, 48, 209, 714-715
- Brachial plexus injury, 228-229, 231, 618
- Brain injury, pathophysiology, 190-191, 224
- Brain tumours, 463, 603, 639-645
- Brainstem function, assessment, 191
- Branchial arches, 234-239, 287, 727
- Bronchial atresia, 288, 747
- Breathing circuits, for airway management, 57
- Breathing problems, 67-69
- Breech delivery, 228-231, 248-249, 252
- Broadband information transfer, 779-780
- Bronchogenic cysts, 238, 288, 289, 338-339
- Bronchopneumonia, 143, 219, 273, 754
- Bronchopulmonary foregut malformation, 287-289
- Bronchopulmonary sequestration, 287-289, 304, 747
- Bronchoscope, 273-276, 280-281, 330, 340
- Bronchoscopy, 112, 215, 272-275, 279, 284-286, 304, 307, 312, 329-330, 649, 761, 763
- Brugia malayi*, 664, 732
- Bruises, as sign of child abuse, 223
- Budd-Chiari syndrome, 503-504, 506, 767
- Burkitt lymphoma, 605-608, 731, 759  
 and Epstein-Barr virus, 605, 608, 759  
 and kidney tumour, 598, 599  
 and lymphadenopathy, 243, 244, 246  
 of thyroid gland, 266
- Burn injuries, 158-159, 214-221  
 as cause of dehydration, 26, 28  
 as cause of shock, 19, 69, 216  
 in child abuse, 159, 223  
 due to caustics, 323-324  
 demographics, 157-159, 182, 214
- Burn injuries (*continued*)  
 oesophageal, 323-325  
 prevention, 160-162, 182, 220, 221, 695  
 relation to peptic ulcers, 372  
 use of topical antibiotics, 64, 218
- Burn victim  
 airway management of, 177, 278-279  
 use of antibiotics, 221  
 examination of, 177  
 nutrition of, 217-218  
 pain management, 218  
 tetanus prophylaxis, 221
- Burn wound, 40, 42, 214, 216-221, 725-726
- Burr-hole evacuation procedure, 192-193
- C**
- Calcium.  
 balance, 29  
 in bladder stones, 583  
 in channel blockers, 320, 413  
 in drugs, 49  
 in gallstones, 487-488  
 as essential mineral, 31-32, 424, 426  
 levels, 31-32, 267, 567, 718-719  
 transits, 17-18  
 in urinary stones, 565-567
- Caloric requirements, 30, 33
- Candida*, 96, 756
- Cannulation, 47-49, 52-53, 173-174, 701
- Carbuncle, 92-93
- Carcinoma, 259, 462, 463, 529, 535, 536, 644  
 acinic cell, 24, 258, 259  
 adenoid cystic, 24  
 adrenocortical, 623  
 biliary, 483  
 bladder, 146  
 bronchioloalveolar, 288  
 choledochal, 483, 486  
 embryonal, 601  
 follicular, 266  
 gastric, 372  
 gonadal, 579  
 hepatocellular, 243, 622-624-627, 630, 767  
 mucoepidermoid, 254, 257, 259  
 nasopharyngeal, 243, 759  
 oesophageal, 319, 327, 429  
 ovarian, 687-689  
 pancreatic, 497  
 papillary, 262, 266  
 penile, 554-561  
 rectal, 462  
 renal cell, 511, 597, 599  
 squamous cell, 220, 238, 327  
 testicular, 569, 578  
 thyroid, 262, 266-268  
 thymic, 338
- Cardiac function, 17-18, 182
- Cardiac injury, 182
- Cardiac structure, 17-18
- Cardiac tamponade, 69, 173, 176
- Cardiogenic shock, 21, 69
- Cardiopulmonary arrest, 67, 73, 772
- Cardiopulmonary depression, 218
- Cardiopulmonary disease, 294
- Cardiopulmonary dysfunction, 738
- Cardiopulmonary resuscitation, 77
- Cardiorespiratory compromise, 299
- Cardiorespiratory event, 60
- Cardiorespiratory monitoring, 56, 68, 73
- Cardiorespiratory processes, 190
- Cardiorespiratory system of conjoined twins, 751-752
- Cardiovascular adaptation, neonates, 9-10
- Cardiovascular complications, of spinal cord injury, 196
- Cardiovascular failure, 69-70
- Cardiovascular function  
 in children versus adults, 55, 60  
 in conjoined twins, 752-753  
 normal paediatric parameters, 70
- Cardiovascular medications, 21
- Cardiovascular physiology, 17-22
- Cardiovascular support, 17-22
- Caroli's disease, 472, 483, 485, 627, 766
- Carotico-cavernous fistula, 194
- Carotid artery aneurysm, 241
- Castleman disease, 242-243
- Casts, 208, 210  
 as cause of skin ulcers, 44  
 for clubfoot correction, 711  
 mermaid, 531  
 spica, 228
- Cat scratch disease, 240-243, 245, 247
- Catheterisation, 47-53  
 clean intermittent, 83, 58, 587, 705-706  
 superselective, 662  
 umbilical, 124, 352  
 urethral, 64, 197, 201-205, 519, 532, 534, 544, 566, 584, 587
- Catheters, 47-53. *See also* Catheterisation.
- Caustic ingestion, 161, 279, 323-328, 330
- Cellulitis, 49, 93. *See also* Inflammation.
- Central nervous system, 167-168  
 in conjoined twins, 753  
 disorders, 56  
 in Hirschsprung's disease, 448  
 in infantile hypertrophic pyloric stenosis, 368  
 infection, 71  
 in obstructive jaundice, 474  
 in omphalitis, 125  
 in poliomyelitis, 716  
 role in blood pressure, 18  
 role in voiding, 581-582  
 in transplantation, 770
- Central venous access, 50-53  
 complications of, 52-53, 379, 771-772  
 indications for, 47, 50  
 infections, 96  
 sites for, 49-53, 70, 72, 173, 342  
 surgical techniques, 51-52, 740
- Cerebral palsy, 56, 250, 257, 304, 311, 699, 733, 761
- Cerebrospinal fluid, 192, 193, 616, 639-641, 644, 699-703  
 fistula, 193, 701, 702  
 leakage, 192-194, 701-703, 729  
 pathways, 640-641  
 rhinorrhea, 730, 758  
 and shunts, 193, 701, 703
- Cervical spine injury, 52, 67, 68, 72, 172, 176, 191, 194-196, 250, 729
- Cervix, 678, 680
- Chest  
 burns, 215  
 complications with sickle cell disease, 37-38  
 in conjoined twins, 750, 752-754  
 drainage of, 294-296, 299, 301-302, 335, 343-344, 740  
 eschars, 215  
 extralobar sequestration, 289  
 flail, 69, 165, 168, 173, 335  
 funnel, 4, 333-337, 740  
 herniation into, 291-294, 315, 747  
 infection, 62, 104, 229, 289, 292, 295, 323, 761  
 injuries, 157, 165, 168-169  
 movement, 58, 69, 72, 173, 292  
 pain, 112, 300, 304, 321, 328, 332-333, 603

- Chest (*continued*)  
 percussion of, 279-280  
 physiotherapy, 176, 196, 302  
 pigeon, 294, 332-334, 719  
 in secondary survey, 176  
 trauma, 176, 180-183, 184  
 tube insertion, 181, 183  
 and tuberculosis, 111, 112, 118  
 tumours, 609, 623, 657  
*See also* Acute chest syndrome; Chest wall;  
 Empyema thoracis.
- Chest wall  
 in burn injuries, 215  
 deformities, 294, 332-337  
 and necrotising fasciitis, 93, 126  
 physiology, 10, 14, 182  
 sinus, 116  
 trauma, 173, 176, 180-182  
 tumours, 615-616, 620, 633-634, 649
- Chiari II malformation, 700, 704. *See also* Arnold-Chiari malformation.
- Child abuse, 222-226  
 and abdominal trauma, 184, 200  
 assessing, 174, 176  
 and burn injuries, 214-215, 220  
 and craniocerebral trauma, 190, 198  
 diagnosing, 174, 176, 191, 206, 223, 224-225  
 laws against, 194  
 and musculoskeletal trauma, 208  
 risk factors, 183  
 sexual, 159, 225-226  
 signs of, 174, 215  
 types of, 159, 222  
 versus birth injuries, 228
- Chlabra shunt, 696
- Choanal atresia, 277-278, 727, 748, 757
- Cholangiography, 473-474, 478, 484-485, 488-489, 629, 753, 769
- Cholangiopancreatography, 473, 484, 486, 488, 492, 495, 496
- Cholangitis, 3, 472-473, 477, 479-481, 483-486, 766, 769
- Cholecystectomy, 36, 37, 107, 473, 488-490, 500, 738, 740
- Cholecystitis, 35, 36, 103-107, 488-489
- Choledochal cyst, 96, 472-473, 476-477, 479, 483-486, 494-495, 649, 766
- Choledocholithiasis, 473, 488-490
- Cholelithiasis, 36, 424, 472, 485, 486, 487-490
- Cholestatic liver disease, 766-767
- Chondroblastoma, 633, 665
- Chondrosarcoma, 633-635, 640, 731
- Chordee, 529, 532, 541-545, 548-552, 555, 557, 578
- Choriocarcinoma, 601, 640, 686, 687
- Chronic granulomas, 241-243
- Chronic wounds, 42-44, 215, 725
- Chylothorax, 308, 342-344
- Circulation, 173-174  
 in ABCDE, 172, 200, 215, 225, 330, 644, 729  
 enterohepatic, 487  
 foetal, 8-10, 15, 291, 343, 575, 649, 661  
 monitoring of, 58-59, 69-70  
 in primary survey, 172-174, 177  
 pulmonary, 9, 14-15, 18, 21, 68, 291
- Circulation, Respiration, Abdomen, Motor, and Speech (CRAMS) scale, 165, 167-168
- Circulatory system, 8-10, 17-22, 42
- Circumcision, 554-558  
 after newborn period, 556, 557, 562  
 as protection against HIV, 77-79, 153  
 complications of, 206, 543, 545, 555, 557, 558, 561, 562  
 contraindications to, 545, 554-555
- Circumcision (*continued*)  
 ethical issues, 77, 222, 554, 558, 561  
 female, 222, 455  
 indications for, 554-555, 558, 561, 563  
 neonatal, 78, 79, 555  
 partial, 554-556  
 procedure, 555-556, 558, 561
- Cirrhosis, 40, 42, 299, 342, 472, 474, 484-486, 503-504, 506-507, 623, 625-626, 628, 630, 766-767
- Citrobacter*, 120
- Cleft glans, 542, 546, 548-549
- Cleft lip, 234, 601, 694-696, 727-728
- Cleft palate, 56, 234, 601, 694-696, 727-728
- Clefts (other)  
 branchial, 234-235, 603  
 laryngeal, 273, 278, 284  
 midline cervical, 237  
 sternal, 336
- Cloaca  
 embryology, 518, 528, 538, 541, 581, 672-673  
 persistent, 455-456, 459, 672-675
- Cloacal anomaly, 348, 536, 582-583, 672-673, 682-683, 753
- Cloacal exstrophy, 429, 437, 528-530, 535, 573
- Closed reduction, 209-210, 212, 714-715, 721, 741
- Clostridia myonecrosis*, 93. *See also* Gas gangrene.
- Clostridia perfringens*, 124
- Clubfoot, 694-697, 704, 709-712, 719-721
- Coagulation, in wound healing, 40
- Coccidioides*, 771
- Colectomy, 106, 117, 405, 445-446, 461-463, 740, 741
- Colitis, 35, 96, 142, 420, 443-444  
 amoebic, 141-142  
 ulcerative, 95-96, 443-446, 500, 741
- Collagen, 41-44, 219, 259, 325
- Colon, 124, 325, 376, 379, 386, 389, 393-394, 397, 413, 416-417, 424, 426, 449  
 aetiology, 529  
 cancer, 462  
 in conjoined twins, 753  
 duplications, 399  
 gastroschisis, 349  
 in Hirschsprung's disease, 449-453, 741  
 injury to, 187, 741  
 intussusception, 404, 406, 408  
 obstruction, 414  
 parasitic infestation, 141, 143, 144  
 perforation, 95, 104, 108  
 polyps, 462-463  
 resection, 420  
 stoma, 429-430, 433  
 ulcerative colitis, 443-445  
 use in grafts, 325-327
- Colonic agangliosis, 448, 453
- Colonic atresia, 402, 437-438
- Colonic gas shadow, 185
- Colonoscopy, 115, 443, 444, 461-463, 467
- Colostomy, 187-188, 225, 378-379, 399, 414, 429-433, 468  
 for anorectal malformations, 84, 379, 455-457, 459-460, 468  
 for cloaca, 675  
 with conjoined twins, 753  
 diverting, 225, 379, 468  
 double-barrel, 457  
 with Hirschsprung's disease, 378-379, 451, 453  
 loop, 456, 583  
 and necrotising fasciitis, 129  
 social stigma, 84
- Computed tomography (CT) scan. *See* CT scan.
- Condylomata accuminatum, 465, 468
- Congenital malformations  
 cystic adenomatous malformation, 287-288, 741, 747  
 diaphragmatic hernia, 5, 14, 229, 288-289, 291-295, 297, 310-311, 390, 393, 603, 746-747  
 muscular torticollis, 248-253, 729  
 pulmonary adenomatous malformation, 287  
 pulmonary airway malformation, 292  
 subglottic stenosis, 278, 761, 763
- Conjoined twins, 750-754
- Contrast-enhanced CT  
 for abdominal trauma, 185, 187  
 for annular pancreas, 492  
 for arteriovenous malformations, 661, 663  
 for bladder outlet obstruction, 586  
 for brain and spinal cord tumours, 642-643  
 for caustic oesophageal injury, 324  
 for cystic lung lesions, 289  
 for liver tumours, 623-624  
 for necrotising enterocolitis, 418  
 for ovarian lesions, 687  
 for salivary gland disease, 255-256, 259  
 for tuberculosis, 115  
 for urinary tract injuries, 201-202
- Contrast-enhanced MRI, 616
- Contrast-enhanced radiography, 32  
 for annular pancreas, 492  
 for anorectal problems, 188, 457  
 for bladder outlet obstruction, 585  
 for colonic atresia, 437  
 for conjoined twins, 751, 753  
 for duodenal atresia, 381  
 for gastrointestinal duplication, 398  
 for Hirschsprung's disease, 450  
 for intestinal atresia, 386  
 for intestinal malrotation, 394  
 for intussusception, 406  
 for neonatal intestinal obstruction, 376-380  
 of oesophagus, 276, 289, 307-308, 315, 320-321, 324, 339  
 for thoracic trauma, 181  
 for ureteric duplications, 519  
 for ureteropelvic junction stenosis, 516  
 for urinary tract injury, 201, 204-205
- Contrast follow-through, 443, 445
- Contrast studies  
 diaphragmatic hernia, 294  
 gastrointestinal stomas, 430, 433  
 tuberculosis testing, 114-115  
 upper gastrointestinal, 284, 289, 311, 315, 320, 369, 412-414, 492
- Corrosive ingestion, 161, 279, 323-328, 330
- Corynebacterium pyogenes*, 730
- Counselling  
 about HIV, 122, 465  
 on disorders of sex development, 578  
 genetic, 453, 695, 697  
 for patients and families, 76, 78, 86, 161, 427, 463, 530, 545, 727, 751  
 prenatal, 749, 754  
 preoperative, 427, 433
- Cranial nerve palsy, 193-194
- Cranio cerebral trauma, 190-194, 224. *See also* Head injury.
- Craniopharyngioma, 639-640, 643-644
- Craniospinal tumours, 639-640
- Craniotomy, for trauma, 192-193, 643
- C-reactive protein, 115, 121, 136, 440, 444
- Critical care, 67-73
- Crohn's disease, 95, 113-115, 443-446, 466
- Cryptococcus* sp., 130, 771

- CT scan, 71-72, 176-177, 398, 738, 779  
 for abdominal trauma, 185-187, 189  
 for annular pancreas, 492  
 for appendicitis, 440-441  
 for arteriovenous malformation, 661  
 for birth injury, 229  
 for bladder outlet obstruction, 585-586  
 for bone tumours, 633-636  
 of brain, 224, 640-645  
 for caustic oesophageal injury, 324  
 of chest, 300, 332, 334, 336, 616, 623  
 for choledochal cyst, 484  
 for choledocholithiasis, 473  
 for cirrhosis, 623  
 of conjoined twins, 751, 753  
 contrast-enhanced. *See* Contrast-enhanced CT.  
 for cystic kidney disease, 511  
 for cystic lung lesions, 287-290  
 for foreign bodies detection, 330-331, 412  
 for gastrointestinal duplication, 398  
 guidance, 95-96, 277, 329  
 for head injury, 190-194  
 for intracranial injury, 229  
 for intussusception, 407  
 for kidney tumours, 598  
 for liver tumours, 623-625, 627-628  
 for lung abscess, 304  
 for lymphangioma, 650-652  
 for lymphomas, 606  
 for mediastinal lymphadenopathy, 244-245  
 for mediastinal masses, 284, 339-341, 603  
 for necrotising enterocolitis, 418  
 for neurodisabilities, 701  
 for omphalitis, 125-126  
 for otorhinolaryngology diseases, 757-761  
 for ovarian lesions, 687  
 for pancreatitis, 495-497  
 for parasitic infestation, 142, 148  
 for pleural effusion, 300-301  
 for portal hypertension, 504  
 for pyomyositis, 121  
 for reconstructive surgery, 726, 729  
 for renal trauma, 203, 230  
 for reproductive tract anomaly, 679, 687  
 for rhabdomyosarcoma, 615  
 for salivary gland diseases, 255-260  
 for scrotal injuries, 206  
 for spinal trauma, 195  
 of spleen, 500-501  
 for surgical site infection, 100  
 for teratomas, 603  
 for thyroid gland evaluation, 262  
 for tracheomalacia, 284  
 in transplantation, 769-770  
 for tuberculosis, 115  
 for ureteropelvic junction stenosis, 514  
 for urinary stones, 567  
 for urinary tract injuries, 201-203
- Cultural factors, 5, 10, 61-62, 76-77, 83-84, 214, 222-223, 330, 416, 572, 697, 750
- Cultured epithelium technique, 219
- Cultures  
 abscesses, 95-96, 105, 120-121, 281, 465  
 of aspirate, 35, 242  
 for biliary atresia, 477  
 blood, 32, 35, 52, 93, 96, 103, 281, 770  
 bone, 35, 135  
 of burn wound, 219-220  
 of catheter, 52  
 cerebrospinal fluid, 193, 702  
 for empyema thoracis, 299-302  
 gallbladder contents, 105, 107  
 for haematogenous osteomyelitis, 135-136, 138, 139
- Cultures (*continued*)  
 for *Helicobacter pylori* infection, 373  
 in lymphadenopathy, 241-243, 245-247  
 for lymphangiomas, 650-651  
 microbiological, 11, 105, 120, 131  
 mycobacterium, 114, 242  
 for necrotising enterocolitis, 418  
 for necrotising fasciitis, 131  
 for nosocomial infection, 94  
 for omphalitis, 125, 353  
 for poliomyelitis, 694  
 for pyomyositis, 120-121  
 for splenic abscess, 500  
 stool, 103  
 of surgical site infection, 98-100, 107  
 tissue, 247, 770.  
 for tuberculosis, 114-116, 118, 245-247  
 urine, 35, 103, 105, 364, 459, 511, 520, 566, 586  
*See also under specific disorders.*
- Curling's ulcer, 220, 372
- Cushing's triad, 191
- Cushing's ulcer, 372
- Cyanosis, 15, 21, 68, 173, 177, 277, 280, 283, 284, 292, 295, 343, 649, 727, 757, 761
- Cystic adenomatoid malformation, 14, 304, 741
- Cystic fibrosis, 304, 376, 401, 403-404, 468, 472-473, 477, 487, 494-496, 498, 565, 748, 759.  
*See also* Meconium ileus.
- Cystic hygroma, 3, 234, 235, 237, 249, 272, 278, 603, 648-649, 726
- Cystic kidney disease, 510-512, 538, 627
- Cystic lesions, 96, 255, 262, 287-288, 339, 354, 626-627, 649-652, 654
- Cystic lung lesions, 747
- Cystic lymphangioma, 648-654, 726
- Cystic nephroma, 599
- Cystic pulmonary lesions, 287-290, 304
- Cystic teratoma, 601, 649, 654, 685
- Cystinuria, 565
- Cystine stones, 566
- Cystogram, 201-204, 520, 524, 532-533
- Cystoscopy, 146, 201, 205, 516, 520-521, 525, 532-533, 539-540, 544, 562, 567, 585, 616, 749
- Cystourethrogram, micturating, 511, 519, 524-525, 539, 583-587, 592, 704
- Cysts  
 adenoid, 254, 257  
 bone, 255, 633-635  
 bowel, 748  
 branchial, 3, 234-237, 249, 603, 649  
 bronchogenic, 238, 288, 289, 338-339  
 choledochal, 96, 472-473, 476-477, 483-486, 494, 649, 766  
 corpus luteum, 688  
 dermoid, 237, 352-353, 557, 640  
 duodenal, 399  
 echinococcal, 500  
*Entamoeba histolytica*, 96, 141  
 enteric, 404, 494  
 epidermoid, 463, 640, 644  
 epididymal, 569  
 excision of, 485  
 extrahepatic, 485  
 follicular, 686-688, 731  
 hepatic, 511, 624, 626-627  
 hilar, 476  
 hydatid, 147-148, 304, 500  
 intraabdominal, 389-390  
 intrahepatic, 485  
 laryngeal, 272-273  
 leptomeningeal, 192  
 lung, 287-290, 292, 747
- Cysts (*continued*)  
 mediastinal, 338-340  
 mucous, 254, 257, 272  
 neck, 234-239, 649-650  
 neuro-enteric, 339  
 omphalomesenteric, 353-354  
 oropharyngeal, 398  
 ovarian, 484, 649, 685-691  
 paratoid, 259  
 parovarian, 688  
 pelvic, 398  
 pericardial, 339  
 popliteal, 3  
 renal, 510, 649  
 retroperitoneal duplication, 398  
 salivary gland, 254, 259  
 spinal cord, 398  
 splenic, 500-501, 740  
 subglottic, 274, 762, 763  
 theracoabdominal, 399  
 thoracic, 398  
 thymic, 238, 649  
 thyroglossal, 3, 234, 237-239  
 thyroid, 266, 268  
 urachal, 125, 352, 354, 581, 584, 649
- Cytokines, cell signaling in, 40
- Cytomegalovirus  
 with liver disease, 473, 623  
 and lymphadenopathy, 243-245  
 and lymphadenitis, 241  
 in neonatal jaundice, 477  
 with pancreatitis, 494  
 in rectal mucosa, 468  
 with transplantation, 769-770
- D**
- Data technology, 778-779
- Debridement  
 with bladder injuries, 204  
 of burn blisters, 215  
 of devitalised tissue, 93-94, 186, 203, 210  
 of empyema, 740, 743  
 in fractures, 209-210, 712-714, 721  
 of fungal infections, 759  
 with myonecrosis, 353  
 in necrotising fasciitis, 126, 129, 132-133, 353  
 with osteomyelitis, 667, 712, 714, 721  
 with otitis externa, 756  
 with pancreatic necrosis, 496  
 in plastic surgery, 730  
 of sequestra, 136-137, 139-140, 209-211, 712-713  
 with skin necrosis, 49  
 thoracoscopic, 302, 742-743  
 of wounds, 43-44, 57, 94, 703, 712-714, 725
- Decannulation, 283, 761
- Deep incisional surgical site infections, 98
- Dehydration, 26-28  
 with burn injuries, 218  
 clinical effects of, 19  
 determining severity of, 26, 104, 369, 407, 576  
 and duodenal obstruction, 381  
 with empyema, 300  
 and gallstone formation, 487-488, 490  
 as indication for small bowel transplantation, 771  
 with oesophageal atresia, 309  
 and parasitic infections, 142  
 perioperative management, 23, 25, 38  
 with pleural effusion, 300  
 with pyloric stenosis, 368-369, 371  
 and shock, 70  
 with short bowel syndrome, 396  
 signs and symptoms of, 19, 25-26

- Dehydration (*continued*)  
 and typhoid fever, 104  
 and xerostomia, 257
- Dengue fever, 244-245
- Diagnostic peritoneal lavage, 176, 184, 187, 189
- Diaphragm, 181-182, 295-297
- Diaphragmatic hernia, 287-289, 342, 740  
 congenital, 5, 14, 291-297, 310-311, 390, 393, 746-747  
 Morgagni, 338  
 and pulmonary hypertension, 9
- Digital data transfer, 779
- Diphtheria, 277, 279, 281, 760, 762
- Disability, 694-698  
 assessment of, 172, 174, 177, 215, 225  
 causes of, 4, 84, 157-159, 633  
 decline in rate of, 169  
 long-term, 165  
 neurodisability, 420, 699-706  
 outcome scale, 193  
 permanent, 208, 212, 228, 231  
 prevention measures, 637  
 treatment to limit, 633, 661  
 urological, 200
- Disability-adjusted life years, 4-6, 157, 637
- Discrimination, social, 78-79, 84-85, 558, 572
- Disfigurement  
 due to burns, 158  
 due to circumcision, 561  
 due to cold abscess, 96  
 due to congenital muscular torticollis, 251  
 due to excisional therapy for arteriovenous malformations, 662  
 due to Fournier's gangrene, 94  
 due to lymphangiomas, 649, 653  
 due to lymphoedema, 664  
 due to necrotising fasciitis, 130  
 due to neurofibroma, 259  
 due to neurofibromatosis, 732  
 due to noma, 731  
 due to Poland's syndrome, 335  
 due to unilateral limb enlargement, 664
- Disorders of sex development, 543-545, 572-579  
 ambiguous genitalia, 3, 359, 683, 572-577  
 and circumcision, 555  
 and Hirschsprung's disease, 452
- Distance information transfer, 778-779
- Diverticulum, 390, 521, 551-552  
 bladder, 354, 582, 583, 585-587  
 extrahepatic bile duct, 483  
 intestinal, 389-394  
 Meckel's, 352-354, 361, 376, 389-391, 404, 412, 463  
 respiratory, 287  
 thyroid gland, 237, 239  
 urethra, 582
- Doppler ultrasonography, 255, 287, 289, 505, 586, 592, 616, 624, 657, 666, 748, 751, 773
- Down syndrome, 255, 264, 342, 381, 384, 390, 448, 453, 456, 491, 493, 694, 746
- Dracontiasis, 141, 144-145
- Drowning, 159
- Duodenal atresia, 306-307, 376-379, 381-384, 390, 394, 484, 748
- Duodenal obstruction, 381-384, 386, 394, 491-493
- Duodenoduodenostomy, 307, 378, 382-384, 492
- Duplications  
 abdominal, 398  
 cervix, 678  
 cystic, 398-399, 463, 484, 603  
 embryology of, 397  
 enteric, 376, 494, 649  
 foregut, 289, 338-340, 397, 398, 603
- Duplications (*continued*)  
 gastrointestinal, 397-399, 404, 463  
 of limbs, 664  
 rectal, 399, 582  
 renal, 202, 519, 522  
 of small bowel, 398-399  
 thoracic, 397, 398  
 ureteric, 518-522, 525, 673  
 urethral, 562, 582, 583, 587  
 vaginal and uterine, 601, 678, 681
- Dyskinesia, 312, 489
- Dysreflexia, autonomic, 21, 197
- E**
- Ear, 139, 756-757, 759, 763
- Echinococci* sp., 147
- Education  
 community health, 108, 302, 330, 536, 592-593, 695, 712, 734, 757  
 denial in African setting, 84, 697, 724  
 to dispel myths, 33, 697  
 of health care providers, 4, 220, 230, 231, 302, 777-778  
 on injury prevention, 159-160, 220, 330  
 lack of facilities for, 5-6, 697, 756, 777  
 paediatric surgery, 783-785  
 of patient and family, 38, 79, 252, 496, 563, 578, 682, 683  
 to prevent necrotising fasciitis, 133  
 resources for, 169  
 on safety, 159-160, 198, 220  
 using telemedicine and e-health, 777-781
- Elbow, supracondylar fracture of, 714-716
- Elective surgery, 3, 4, 19, 30, 33, 56-57, 72, 78, 82, 98, 152  
 for abdominal tuberculosis, 116-117  
 bowel resection, 772  
 caesarean section, 152  
 cholecystectomy, 36, 488, 490  
 of conjoined twins, 751-752, 759  
 delivery, 747  
 exploration of testes, 92  
 for hydrocele, 364, 592  
 for inguinal hernia, 360, 362, 364-365, 592  
 nephrectomy, 772  
 for oesophageal atresia, 307  
 splenectomy, 438, 501-502, 740  
 tonsillectomy, 760  
 transplantation, 772  
 for ulcer, 373  
 for umbilical hernia, 355, 356  
 for valvular injury, 182
- Electrolyte balance, 23-29, 107, 426, 428, 771
- Electrolyte imbalance, 30, 109, 132, 142, 343, 371, 381, 446
- Embryology  
 bile ducts, 487  
 branchial arches, 234-237, 287  
 cloacal membrane, 528, 541, 672  
 gastrointestinal duplication, 397  
 genitalia, 358, 541, 672  
 importance of, 724  
 larynx, 287  
 limb, 664  
 lung, 287  
 lymphatic system, 648  
 mesenchymal cells, 660  
 midgut, 393  
 palate, 727  
 umbilical cord, 352, 393  
 ureteric duplications, 518  
 urogenital system, 358, 581, 672-673  
 vitelline duct, 389  
 wolffian duct, 518
- Emphysema  
 congenital lobar, 287, 289, 747  
 subcutaneous, 181, 730  
 with tuberculosis, 114
- Empyema, 116, 287, 299-302, 304, 326, 740, 742, 743
- Empyema necessitans, 299-300, 302
- Empyema thoracis, 93, 299, 301-302
- Enchondroma, 633-635, 665
- Endoscope, 272, 274, 275, 330-331, 414, 504, 758, 759
- Endoscopy, 273-275, 373  
 in aerodigestive foreign body diagnosis, 330-331  
 in bladder outlet obstruction diagnosis, 587  
 in choanal atresia diagnosis, 757  
 in corrosive ingestion, 323-325, 328  
 dilatation, 325  
 in familial adenomatous polyposis investigations, 462  
 gastrointestinal, 504-505  
 in gastrointestinal stomas, 432  
 in *Helicobacter pylori* diagnosis, 373-374  
 in inflammatory bowel disease investigation, 443-444  
 in intestinal obstruction diagnosis, 412  
 oesophageal, 320  
 in rectal bleeding diagnosis, 390  
 in transplantations, 773  
 upper GI, 311  
 urogenital, 577, 582, 751, 753  
 in vocal cord paralysis diagnosis, 761  
 zoom, 773
- Endotracheal tubes, 58
- Enlarged arteriovenous malformations, 661-662
- Enlarged bladder, 586
- Enlarged cervical node, 249
- Enlarged choledochal cyst, 484
- Enlarged epiglottis, 762
- Enlarged genitals, 266, 575-576, 578, 586, 672, 673
- Enlarged head. *See* Hydrocephalus.
- Enlarged hilar node, 111
- Enlarged kidney, 510
- Enlarged limb, 664-668
- Enlarged liver, 35, 105, 142, 146, 281
- Enlarged lymph nodes, 3, 96, 112, 114, 152, 235, 240-247, 266, 362, 404, 409, 649
- Enlarged masseter muscles, 527
- Enlarged mediastinal node, 111
- Enlarged neural foramina, 644
- Enlarged pancreas, 115, 495
- Enlarged parotid gland, 256, 257
- Enlarged pons, 643
- Enlarged salivary gland, 254
- Enlarged spinal cord, 716
- Enlarged spleen, 35, 281, 766
- Enlarged thyroid gland, 238, 263-265, 267, 268
- Enlarged tonsils, 281, 760
- Enlarged utricles, 544
- Entamoeba histolytica*, 96, 141-142, 444, 467
- Enteral antibiotics, 561
- Enteral nutrition, 30-33  
 and annular pancreas, 492  
 and burn patients, 214, 217-218  
 and cystic fibrosis, 402  
 and gastro-oesophageal reflux, 313  
 and gastroschisis, 349  
 and hypermetabolic response, 214  
 and intestinal atresia, 383, 387  
 and short bowel syndrome, 424-427  
 and thoracic duct flow, 343  
 and typhoid fever, 109
- Enterobacter* sp., 93, 130, 218

- Enterobius vermicularis*, 467  
 Enterocolitis, 404, 429, 770  
   Hirschsprung's-associated, 379, 450-453  
   necrotising, 31, 95, 125, 416-421, 424, 427, 473, 487, 490, 751-752  
 Enteroplasty, 380, 387  
 Enterostoma, 429, 430, 433  
 Enterostomy, 106-107, 143, 379, 402, 414, 419, 484  
 Ependymblastoma, 641  
 Ependymoma, 639-644  
 Epididymitis, 364, 590-593  
 Epidural anaesthetic, 59, 63-64, 197, 332, 335  
 Epidural haematoma, 190-194  
 Epidural neuroblastoma, 610  
 Epiglottitis  
   acute, 280-281, 761-762  
   in bronchoscopy, 275  
   and upper airway obstruction, 279-280  
   in laryngomalacia, 278, 761  
   in laryngoscopy, 272  
 Epispadias, 359, 528-536  
 Epistaxis, 176, 194, 726, 730, 759-760, 763  
 Epithelial tumours, 257-259  
 Epstein-Barr virus  
   and Burkitt lymphoma, 60, 608, 759  
   and glandular fever, 281  
   and lymphadenopathy, 243, 244  
   and pancreatitis, 494  
   and transplantation, 770-771, 774  
*Escherichia coli*  
   and bone infection, 36  
   and epididymitis, 590  
   and liver abscess, 96  
   and necrotising fasciitis, 93, 130  
   and otitis media, 76  
   and postsplenectomy sepsis, 502  
   and septic arthritis, 139  
 Ethics, African, 76-80, 453. *See also* Cultural factors; *Ethical Issues sections in each chapter.*  
 Ewing's sarcoma, 136, 614, 616, 618, 620, 633-634, 636-637, 665  
 Excision  
   for burns, 216, 218-219, 221  
   of cephalhaematoma, 228  
   of dead and necrotic tissue, 93  
   of heterotopic ossification, 197  
   for hypertrophic scar, 42  
   for neck fistula, 235  
   of peritoneal adhesions, 127  
   in tuberculosis patients, 96, 112  
   *See also* Debridement.  
 Exomphalos, 9, 28, 31, 292, 348-351, 747-748, 751-752  
 Exposure, ABCDE, 174, 215, 225  
 Extrahepatic bile duct, 472-473, 476, 477, 479, 483, 487  
 Extrahepatic biliary atresia, 473, 625, 766, 775  
 Extrahepatic biliary system, 472-473, 476-478, 483  
 Extrahepatic choledochal cysts, 483, 485  
 Extrahepatic obstructive disorders, 481  
 Extrahepatic portal hypertension, 503  
 Extramedullary haematopoiesis, 499, 501  
 Extramedullary tumour, 644  
 Extrapulmonary tuberculosis, 112, 116-117, 239, 241  
 Extravasation  
   in bladder injury, 204  
   in burn injury, 214  
   as complication of peripheral cannulation, 53  
   contrast, 185, 204-205, 585  
   as infection cause, 181  
 Extravasation (*continued*)  
   of intraabdominal bile, 473  
   in major renal injury, 202  
   mucous, 257  
   with thrombosis, 49, 53  
   during transport, 12  
   in urethral injury, 205  
   with vascular access, 49, 53  
 F  
 Face masks, 20, 57, 68-69, 280  
 Facial nerve, 235, 255, 258, 259  
   injury to, 191, 229, 242, 254, 258, 259, 261  
   palsy, 191, 229, 258-259, 653, 730  
 Familial adenomatous polyposis, 461-463, 625, 771  
 Fasciotomy, 132, 209, 717  
 Fasting  
   with cholelithiasis, 487, 490  
   guidelines, 26-27, 55-56, 60, 293, 773-774  
   status, 203, 343  
 Fat embolism, 194  
 Femoral anatomy, 362  
 Femoral artery, for vascular access, 48, 52  
 Femoral epiphysis, 266  
 Femoral head, 36, 139  
 Femoral hernia, 358, 360, 362-363, 365, 376  
 Femoral shaft fracture, 165, 169, 210  
 Fibroblasts, 41-42, 44, 145, 218-219, 353, 554, 619, 731  
 Fibrosarcoma, 613-614, 621, 633, 649, 685  
 Fibrous dysplasia, 633-635, 731  
 Fibrous histiocytoma, 614, 618-619, 633, 640  
 Filariasis, 244, 342, 664-667, 732  
 Fissure-in-ano, 429, 452, 463, 465-467  
 Fistulas, 465-469  
   anorectal, 455-460  
   arteriovenous, 503, 661, 665  
   bowel, 31-32  
   broncho-oesophageal, 273  
   bronchopleural, 202  
   carotico-cavernous, 194  
   cerebrospinal fluid, 193, 701, 702  
   in Crohn's disease, 446  
   enterocutaneous, 3, 108, 409, 433  
   faecal, 390  
   gastrocutaneous, 433  
   gastrointestinal, 725  
   lymphatic, 653  
   mucous, 457, 674  
   in neck, 234-239  
   omphalomesenteric, 353, 389  
   palatal, 728  
   pancreatic, 382, 497  
   perianal, 377-379, 445, 453  
   perineal, 455-456  
   rectal, 458-459, 468  
   rectourethral, 741  
   rectourinary, 456  
   rectovaginal, 3, 152, 429, 465  
   retrovestibular, 455-459  
   salivary, 259  
   surgery, 466  
   thoracic, 342-343  
   thyroglossal, 238-239  
   tracheo-oesophageal, 278, 283, 286, 304, 306-308, 311, 325, 329, 491, 740-741, 748  
   in tuberculosis, 113, 116-118  
   and typhoid fever, 108  
   umbilical, 125  
   urethral, 455, 457, 468, 551-552, 741  
   urethrocutaneous, 235, 546, 556-557  
   urethrovaginal, 205, 455, 673  
   urinary tract, 458, 587  
 Fistulas (*continued*)  
   vesicorectal, 582  
 Fistula-in-ano, 465-466  
 Flap, 42-43, 297, 308, 712  
   over anastomosis, 326  
   over bladder, 203-204  
   bone, 193  
   for hypospadias, 548-552  
   Mathieu technique, 548-549  
   muscle, 138, 180, 294, 302, 335, 343, 350, 534, 675, 680, 752  
   myocutaneous, 37, 335, 725  
   for pectus carinatum, 332  
   pleura, 180  
   reconstruction, 132, 725, 731, 733  
   rotational, 192, 728  
   scalp, 193  
   skin, 138, 350, 532, 545, 675, 680, 706, 752  
   Thiersch technique, 431, 468, 548-549  
   tissue, 44, 336  
   ureteral, 203, 515  
 Flat glans, 542, 546, 548  
 Fluid and electrolyte status  
   absorption, 112  
   balance. *See* Fluid balance; Electrolyte balance.  
   deficits, 105, 413-414  
   depletion, 369-371  
   imbalance, 30, 109, 132, 142, 343, 371, 381, 446  
   losses, 8, 11, 72, 187, 387, 427, 451-452, 496, 586  
   needs, 30  
   problems, 55, 369, 432  
   replacement, 382, 492  
   therapy, 23-29, 70  
 Fluid balance, 28-29, 30, 72, 105, 107, 109, 343, 426, 428, 496, 689, 752, 771  
 Fluid resuscitation, 16, 20-22, 173, 186, 198, 214, 217, 220, 374, 378-379, 396, 407, 492, 520, 730  
   bolus infusions, 17, 21-22, 51, 70, 72, 105, 373, 395  
   ethical issues about, 32  
   guidelines, 30  
   hypotonic, 71  
   infusion, 47-50, 176  
   intraoperative, 26-28  
   intravenous. *See* Intravenous fluids.  
   isotonic, 12, 176, 395  
   maintenance, 12, 25, 177, 185, 216, 408, 496  
   monitoring, 21, 773  
   normal saline, 20, 176, 408  
   perioperative management, 23-29  
   postoperative management, 28  
   requirements, 25-27, 30  
   replacement, 12, 105, 132, 143, 174, 257, 280-281, 343, 369, 382, 386, 479  
 Fluoroscopy, 50-51, 202, 292-293, 295, 329, 331, 408, 410, 457, 477, 519, 652, 674, 701, 721  
 Foetal shunt, 9-10, 15, 287, 291, 398, 538, 661, 747-749  
 Foetal therapy, 746-749  
 Folliculitis, 92  
 Fontanelle, 19, 26, 191, 229, 265, 640  
 Foreign bodies  
   aerodigestive, 329-331  
   aural, 756  
   catheters as, 49, 52, 546  
   ingested, 159, 201, 329-331, 390, 412-415, 440  
   inhaled, 4, 64, 67, 172, 272-276, 277-280, 304, 329-331  
   nasal, 758  
   as nidus for stone formation, 583  
   penetrating, 190, 192, 200

- Foreign bodies (*continued*)  
 stents as, 546  
 in wound, 43, 93, 99-100, 201, 209-210, 212, 713
- Foreskin, 529, 541-544, 547-548, 550-551, 554-558, 560-563
- Fournier's gangrene, 93-94, 129, 556
- Fractures, 208-212, 709, 712-714, 720, 721
- Fulminant hepatic failure, 766-767
- Fundoplication, 284-286, 294, 312, 313-317, 320, 321, 740, 741. *See also* Antireflux surgery.
- Furuncle, 92
- Fusiformis fusiformis*, 730
- Fusobacterium* sp., 120, 730
- ## G
- Gallbladder  
 with biliary atresia, 476-478  
 cancer, 483  
 cholecystitis, 104-105, 107  
 cholesterol in, 489  
 in conjoined twins, 753  
 contraction, 424  
 distention of, 488, 489  
 floating, 488  
 hydrops of, 488  
 perforation, 107  
 removal of, 489-490  
 with sickle cell disease, 35-36  
 teratomas, 603  
 with typhoid fever, 104
- Gallstones, 36, 424, 472, 485-490
- Gardner's syndrome, 462-463
- Gas gangrene, 92, 93, 129, 130, 132
- Gastric outlet obstruction, 113, 323, 370, 372, 374, 375, 429, 484, 603
- Gastrointestinal anomalies, 368
- Gastrointestinal bleeding, as complication of typhoid fever, 107
- Gastrointestinal duplication, 397-399, 404, 463
- Gastrointestinal injury, 186-187
- Gastrointestinal lesions, 748
- Gastrointestinal obstruction, 28
- Gastrointestinal problems, with spina bifida, 704
- Gastrointestinal system, in conjoined twins, 753
- Gastrointestinal tract complications of spinal cord injury, 196-197
- Gastro-oesophageal obstruction, 113, 323, 370, 372, 374, 375, 429, 484, 603
- Gastro-oesophageal reflux disease, 310-317, 418, 757
- Gastroschisis, 9, 28, 348-351, 747-748  
 and colonic atresia, 437  
 and inguinal hernia, 359  
 and intestinal atresia, 376, 385  
 and short bowel syndrome, 424, 427  
 and vitelline duct anomaly, 390
- Gastrostomy, 275, 294, 307, 311, 313-315, 325-327, 387, 414, 429, 433, 651, 740
- Gaucher's disease, 477, 501
- Gender  
 and anorectal malformations, 456  
 assignment, 530, 535, 541-555, 572, 576-579  
 differences in vesicoureteric reflux, 523  
 identity, 545, 577-578  
 role in pain perception, 61-62  
 social bias in Africa, 31, 84  
 work toward equality, 777
- Genitalia. *See specific organs.*
- Germ cell tumours, 266, 338, 340, 569, 573-574, 578, 601, 640, 685-687, 689
- Glandular fever, 277, 279, 281. *See also* Mononucleosis, infectious.
- Glans, 37, 206, 532, 541-551, 554-558, 560-563
- Glanuloplasty, 542, 548-549
- Glasgow Coma Scale, 165-167, 174, 191, 496, 729
- Glasgow Outcome Scale, 193, 496
- Glioblastoma, 613, 640, 643
- Glioma, brain-stem, 639-645, 732, 758
- Glomerular filtration rate, 23-25, 55, 584, 738
- Glucose, 11, 23-29, 32, 56, 71, 115, 193, 216-217, 417-418, 623, 779
- Goiter, 262-264, 266, 268, 603
- Gonad. *See* Ovary, Testis
- Gonadectomy, 574, 578, 589
- Gonadoblastoma, 686, 687
- Gonococcus*, 502
- Graft, skin. *See* Skin graft.
- Granulomas, and lymphadenopathy, 241-243
- Graves' disease, 262, 264-265, 268. *See also* Hyperthyroidism.
- Gyandroblastoma, 686
- ## H
- Haddon matrix, 160-161
- Haemangioblastoma, 640, 660
- Haemangioendothelioma, 619, 622, 627, 633, 657  
 hepatic, 619, 725, 767  
 infantile, 626  
 Kaposi, 151, 243, 299-302, 342, 613, 619, 621-623, 626, 630
- Haemangioma, 336, 404, 501, 634, 657-659, 725-726  
 bone, 633, 634, 665  
 congenital, 619, 725-726, 763  
 craniofacial, 336  
 laryngeal, 274-275, 278  
 liver, 623-624, 628, 629  
 neck, 234  
 salivary gland, 254-256  
 spinal cord, 644  
 vascular, 660-661, 663, 665-667, 725
- Haemangiopericytoma, 619, 621, 633
- Haematogenous osteomyelitis, 135-140, 665, 712, 721
- Haematology, 50, 56
- Haematomas  
 cephalohaematoma, 228  
 in craniocerebral trauma, 191-194  
 intracranial, 190-192, 198  
 on liver, 186  
 in reconstructive surgery, 724-725  
 scrotal, 364  
 splenic, 501  
 subdural, 192, 223  
 on thoracic wall, 176  
 ureteric, 526
- Haematopoiesis, 499, 501
- Haemoglobin, 34-38  
 and carboxyhaemoglobin, 16  
 disorders, 9, 34-38, 223  
 foetal, 14-15, 56  
 level, 14-15, 27-28, 56, 93, 349-350, 373, 488, 490, 728, 760  
 pathophysiology, 34  
 and sickle cell disease, 56, 132, 138, 487-488  
 in stool, 390
- Haemoglobinopathies, 34-38. *See also*  
 Haemoglobin, disorders; Sickle cell disease; Thalesaemia
- Haemogram, 105, 109, 132, 191, 369, 586, 726
- Haemolytic disease, 487, 488
- Haemophilus*, 120
- Haemophilus influenzae*  
 bacterial tracheitis, 281  
 bone infection, 36  
 epiglottitis, 280, 762
- Haemophilus influenzae (continued)*  
 pneumonia, 299  
 postsplenectomy sepsis, 502  
 rhinosinusitis, 758  
 septic arthritis, 139  
 sickle cell disease, 38  
 splenectomy, 501, 502
- Haemorrhoids, 465-466, 468
- Haemostasis, 40, 45, 100, 193, 238, 251, 331, 361-362, 432, 545, 555-557, 561-563, 629, 725
- Haemothorax, 50, 72, 173, 175-176, 181, 335
- Haller index, 333-334
- Hamartoma, 287, 339, 461-462, 501, 623-624, 626-627, 629, 633-634, 649, 673, 725
- Hashimoto's disease, 262, 264, 266
- Head injury, 190-198  
 assessment of, 164-169, 184, 215  
 causes of, 157-160, 180, 183, 215  
 in child abuse, 184, 223-224, 226  
 closed, 56, 193, 194  
 complications of, 193-194, 372, 639  
 and consciousness, 70  
 due to falls, 158  
 haemangiomas, 657-659  
 lymphangiomas, 647-650  
 management, 173-174, 176, 191-192  
 transport-related, 157, 160  
 tumours, 243-244, 254, 259, 607, 613-620, 726, 759
- Head size, 31, 55, 58-59, 172, 215, 229, 291, 640, 695-696, 705, 747
- Head tilt, 248-253, 311, 729
- Headache, 104, 146, 194, 244, 524, 640, 643-644, 699, 702, 732, 759
- Health InterNetwork Access to Research Initiative, 780
- Health services, planning for, 700
- Hearing loss, 756-757
- Heart  
 Alagille syndrome, 473  
 block, 333  
 in conjoined twins, 751, 753  
 defects, 277, 306, 598, 601, 673, 727, 748  
 disease, 17, 20, 55-56, 69, 82, 289, 332, 336, 381-382, 416, 473-474, 499  
 displacement of, 181, 234, 333, 335  
 failure, 17, 70, 299, 342, 501-502, 661, 761, 767  
 function, 17  
 injuries, 182  
 murmur, 139  
 rate, 17-20, 22, 24, 26-27, 55, 58, 62, 70, 72, 125, 173, 196  
 rheumatic heart disease, 760, 763  
 rhythm, 58, 70  
 shadow, 70, 292  
 sounds, 176-177, 182, 778  
 trauma, 182
- Helicobacter pylori*, 372-373, 375, 389
- Heller's myotomy, 320-321
- Hemicolectomy, 106, 117, 405
- Hemihyperplasia, 664-665
- Henoch-Schönlein purpura, 404, 463, 494, 590-592
- Hepatectomy, 485, 767-768, 772
- Hepatic abscess, 96, 103, 124-126, 141-143, 353, 627
- Hepatic adenoma, 627
- Hepatic amoebiasis, 142
- Hepatic artery thrombosis, 769, 774, 775
- Hepatic cirrhosis, 40, 42, 299, 342, 504, 506, 626
- Hepatic cysts, 511, 627
- Hepatic ducts, 478, 485



- Hepatic dysfunction, 472, 480  
Hepatic embolisation, 626, 628  
Hepatic failure, 476, 511, 766-767  
Hepatic fibrosis, 472, 474, 483-485, 504  
Hepatic function tests, 33, 96, 116, 118, 142, 201, 477, 485, 503, 616, 623, 773  
Hepatic injury, 180, 184-186, 229-230, 315, 741  
Hepatic obstruction, 476  
Hepatic resection, 627-629  
Hepatic sarcoma, 626  
Hepatic sequestration, 35-36  
Hepatic tuberculosis, 113, 118  
Hepatic veins, 503-506, 625, 628-629, 768-769  
Hepaticoduodenostomy, 484, 485  
Hepaticoenterostomy, 485  
Hepaticojejunostomy, 484, 485, 753  
Hepatobiliary system, conjoined twins, 751, 753  
Hepatoblastoma, 462, 622-624, 628, 630, 767  
Hepatocellular carcinoma, 243, 622-624, 626-627, 630, 767  
Hepatocellular dysfunction, 472, 477, 481, 766  
Hepatosplenic tuberculosis, 113  
Hepatosplenomegaly, 115, 139, 146, 244  
Hernia, 182, 358-365  
  abdominal, 350-351, 590-591, 747  
  Bochdaleck, 291-293  
  bowel, 291, 349, 414, 590  
  of brain stem, 641  
  of brain tissue, 758  
  as cause of acute scrotum, 590-592  
  diaphragmatic. *See* Diaphragmatic hernia.  
  epigastric, 3  
  external, 412  
  femoral, 358, 360, 362-363, 365, 376  
  groin, 358, 364-365  
  heart, 182, 336  
  hiatal, 291, 311-315, 339  
  hindbrain symptoms, 700  
  incarcerated, 355, 361-362, 364-365  
  incisional, 3, 100, 294, 391, 409, 741  
  inguinal, 3, 152, 358-362, 364, 365, 377, 499, 529, 569, 590-591  
  internal, 377, 385, 394, 412, 414, 478  
  Littre's, 361, 390  
  liver, 293  
  lung, 335  
  Morgagni, 291-293, 338, 342, 601  
  parastomal, 430-432, 457  
  and peritonitis, 591  
  rectal, 467  
  recurrent, 315  
  sac, 294, 570  
  trocar, 741  
  umbilical, 3, 124, 126, 265, 336, 348-349, 352, 354-356, 393  
Hirschsprung's disease, 3, 47, 448-453, 491, 694-695  
  associated anomalies, 448  
  and bladder outlet obstruction, 583, 585  
  and colonic atresia, 437-438  
  and enterocolitis, 416, 418, 453  
  and gastrointestinal stoma, 429, 433, 457  
  intestinal obstruction, 376-378  
  and laparoscopic surgery, 741-742  
  and meconium ileus, 402  
  and short bowel syndrome, 424  
  surgical procedures, 379, 451-453, 741  
  and tuberculosis, 113  
  and vitelline duct malformation, 390  
History of paediatric surgery, 4  
HIV, 151-153  
  antiretroviral treatment, 78-79, 117, 151, 225-226, 256  
  and cholestasis, 472  
HIV (*continued*)  
  circumcision as a preventive measure, 77, 79  
  confidentiality regarding, 79  
  demographics, 71, 151, 783  
  discrimination due to, 72, 79  
  ethics related to, 78-79, 153, 599, 714, 742  
  and health care workers, 48, 79, 151, 153  
  informed consent, 78-79  
  and Kaposi sarcoma, 299, 302, 619, 622, 626, 630  
  and laryngeal infection, 761  
  and leiomyosarcoma, 618  
  and liver tumours, 623, 626, 630  
  and lung abscess, 304  
  and lymphadenopathy, 240-243, 245, 247  
  and lymphoma, 243, 339, 605-607, 759  
  Millennium Development Goal, 777  
  and neck sinuses, 239  
  and necrotising enterocolitis, 416-417  
  and necrotising fasciitis, 129, 132  
  and otitis media, 756  
  and pancreatitis, 494  
  prevention by neonatal circumcision, 79  
  and pyomyositis, 93, 120, 122  
  and rectal fistula, 465-466, 468-469  
  resources for control of, 3-4  
  and rhinosinusitis, 758  
  and salivary gland lesions, 254, 256-257  
  and sexual assault, 225  
  surgical risk, 78, 99-100, 152-153  
  testing, 78-79, 153  
  transmission of, 11, 151-153  
  and transplantation, 767  
  and tuberculosis, 111, 115, 117-119, 241, 339  
  and Wilms' tumour, 599  
Hodgkin's disease, 243, 245, 264, 338, 605-606  
Hopkins rod telescope  
  in bronchoscopy, 272-274  
  in laparoscopy, 441, 489, 739  
Human immunodeficiency virus. *See* HIV.  
Hydatid disease, 141, 147-148, 626  
Hydrocele, 3, 358-365, 590, 592, 666, 673  
Hydrocephalus, 193, 278, 513, 603, 639-644, 695-699, 701, 704-706, 728, 761  
Hydrometrocolpos, 582-583, 672-676  
Hydrops, 289, 291, 398, 649, 747-748  
  foetalis, 287, 342-343, 602-603, 623, 660-661, 747  
  gallbladder, 488  
  prenatal, 603  
Hymen, 225, 673  
  imperforate, 672-676, 682-683  
Hyperaemia, 93, 130, 131, 214, 417, 504, 665, 733  
Hyperglycaemia, 11, 26, 28-29, 32, 218, 220, 495  
Hyperkalaemia, 28, 58, 104, 196, 218, 369, 768  
Hyperparathyroidism, 265, 267  
Hyperplasia, 242, 288, 338, 424, 440, 463, 660, 685  
  congenital adrenal, 572, 574-575, 579  
  epithelial, 146, 263  
  focal nodular, 263, 503, 623-624, 626-627  
  and lymphadenopathy, 240-243  
  of the parathyroid gland, 267  
  reactive, 241, 245  
  of the thyroid gland, 263, 266-267  
Hypertension  
  due to distended bladder, 197  
  intracranial, 190-191  
  and neuroblastomas, 609-610  
  portal, 126, 146, 353, 468, 472, 476, 479-480, 484, 500, 503-507, 740, 766, 768  
  with pregnancy, 746  
Hypertension (*continued*)  
  pulmonary, 9-10, 15, 291, 295, 297, 503, 746, 761, 769  
  relation to pain, 62, 64  
  renal, 202, 511, 523, 526, 584, 598  
  venous, 661-662  
Hyperthyroidism, 262, 264-265, 266, 268, 728, 731  
Hypoglycaemia, 10-13, 26, 28-29, 56, 60, 70-71, 220, 229, 349, 382, 767  
Hypokalaemia, 28, 218, 369, 374, 412  
Hyponatraemia, 23, 28, 197, 230, 369, 374  
Hypopharynx, 236-237, 276, 327  
Hypopituitarism, 194, 265  
Hypoplasia  
  biliary, 472-474  
  breast, 335  
  genital, 306, 543, 678, 748  
  glandular, 255  
  hemifacial, 248-252  
  leg, 710  
  Leydig cell, 573, 574  
  lymphatic, 726, 732  
  maxillary, 727  
  Poland's syndrome, 335  
  pulmonary, 14, 291, 295, 335, 343, 584, 603, 747, 749  
  thoracic, 342  
  urethral, 581, 582  
  vascular malformations due to, 660  
Hypoproteinaemia, 108, 214, 256, 343, 374, 602  
Hypospadias, 359, 541-552, 555, 562, 569, 574, 578, 598, 601, 696-697  
Hyposplenism, 500  
Hypotension  
  cause of, 18, 104  
  as cause of decreased consciousness, 70  
  as cause of mucosal ischaemia, 416  
  and dehydration, 26  
  management, 173-174, 176, 202  
  medication for, 21-22, 106  
  with necrotising enterocolitis, 417  
  with necrotising fasciitis, 131  
  and neurological injury, 191  
  with omphalitis, 125  
  orthostatic, 17, 21  
  with pancreatitis, 495  
  and renal function, 24  
  with shock, 104, 173  
  with sickle cell disease, 500  
  as sign of pericardial tamponade, 182  
  with spinal cord injury, 196  
  in surgical situation, 28, 738  
Hypothermia  
  as cause of hypoglycaemia, 28  
  as indication of sepsis, 20, 220, 353  
  management, 174, 195, 209  
  with necrotising fasciitis, 131  
  neonatal, 10  
  with omphalitis, 125  
  with physical abuse, 223  
  postoperative, 28  
  prevention of, 187, 209, 349, 489, 768  
  with shock, 20, 173  
  with sickle cell disease, 38, 488  
  in surgical situation, 27, 100, 662  
Hypothyroidism, 262, 264-266, 376, 472, 473, 477, 627  
Hypovolaemia, 20-22, 28, 55, 59, 68, 70, 72, 173-174, 209, 214, 218, 488, 738  
Hypovolaemic shock, 19-22, 35, 69-70, 72-73, 173, 192, 216, 378, 491  
Hypoxaemia, 15, 20, 281  
Hypoxia, 10, 15, 70, 174, 229

- Hypoxia (*continued*)  
acute, 193  
in burn injuries, 218, 220  
in foreign body inhalation, 273  
and nervous system, 16, 70  
renal function effect, 24-25  
risk of, 57, 59, 68, 72, 176, 191, 274, 291  
role in gastrointestinal duplications, 397  
role in sickle cell disease, 488, 500  
role in vocal cord paralysis, 761  
sodium level effect, 23  
tissue, 16, 28, 43  
in tracheomalacia, 283, 284  
and typhoid fever, 104, 105
- I**
- Ileocaecal valve, 114-115, 379, 408, 413, 424  
Ileosigmoid knotting, 412, 414, 415  
Ileostomy, 31, 109, 116-117, 420, 429-430, 445, 453, 773  
Ileum, 376, 378, 389-391, 424  
in atresia, 385  
in cloacal exstrophy, 529  
closure of perforation, 106-107  
in gastrointestinal duplications, 397, 399  
in inflammatory bowel disease, 443-445  
intussusception, 404, 408  
in meconium ileus, 401-403  
in necrotising enterocolitis, 416-417, 420  
in tuberculosis, 112-115  
in typhoid fever, 104-106
- Imaging. *See Management entries for individual disabilities and diseases.*
- Immobilisation  
for fractures, 208-211, 212, 713  
after grafting, 219, 724  
in prehospital care, 172, 177, 195  
after osteotomy, 530-531  
after reconstructive surgery, 72  
with septic arthritis, 139  
for spinal cord injury, 67, 68, 72, 172, 174, 176-178, 195, 196  
voluntary, 132
- Immune function, neonates, 11
- Immunisation, 3, 38, 72, 122, 501-502, 695, 697, 714, 716, 721, 757, 762  
diphtheria, 281, 762  
hepatitis B, 622, 630  
influenza, 280, 281  
polio, 118, 721  
rotavirus, 404, 405  
tetanus, 132, 187, 712
- Impetigo, 92, 135, 220, 225
- Infantile hypertrophic pyloric stenosis, 368-371, 742. *See also Pyloric stenosis.*
- Infection (*continued*)  
anorectal, 187, 465-466, 468. *See also Tetanus.*  
auditory canal, 235, 240  
bacterial. *See Bacterial infection.*  
beta haemolytic streptococcus, 760, 763  
with biliary atresia, 476  
bladder, 532, 535, 582-584, 586-587  
with bronchoscopy, 275-276  
with burns, 215, 218-221  
cardiogenic shock, 21  
cat scratch disease, 242  
catheter, 220, 540  
central nervous system, 71, 705  
central venous line, 50-53, 96  
chest, 104, 229, 289, 292, 295, 335, 761  
and childhood mortality, 71-72  
circumcision, 554, 556-557  
cleft lip repair, 728  
deep incisional, 98
- Infection (*continued*)  
with duplications, 518-522  
ear, 728, 756  
effect of penicillin, 38  
enteric, 427-428  
Epstein-Barr virus. *See Epstein-Barr virus.*  
evaluation of, 72  
fulminant, 93-95, 502, 712, 721  
fungal, 71, 241, 299, 756, 759, 769-771  
gastrointestinal tract, 111-112, 323  
gastro-oesophageal, 313, 315  
with haemangiomas, 657  
with haematogenous osteomyelitis, 135-140  
herpes, 257  
Hirschsprung's disease, 451  
HIV. *See HIV.*  
with hydrometrocolpos, 674-675  
with hypospadias, 541, 551  
intracranial, 193  
kidney, 511, 514, 523-527  
labial, 682  
laryngeal, 761-762  
leg ulcer, 37  
liver, 622, 625, 630  
lung, 181, 287-290, 304  
lymph node, 240-247, 665  
with lymphangioma, 648-654  
with lymphoedema, 732  
malarial, 502  
management of, 72  
maternal, 8, 417  
miliary, 111  
mononucleosis, 243, 281  
musculoskeletal, 709, 712  
mycobacterial, 43, 115, 117-118, 242, 299, 300. *See also specific mycobacteria.*  
nasal, 240, 757  
near fractures, 210-211, 712-714  
neck, 234-238, 245  
neonatal, 11, 25  
noma, 730  
nosocomial, 94  
oesophageal injuries, 181  
with omphalitis, 124-127  
organ space, 98-99  
pancreatic, 494, 496  
parasitic, 71, 244, 664-667. *See also Parasites.*  
parotid, 257-259  
pelvic, 680  
peridontal, 241  
perineal, 225  
with peripheral cannulation, 49, 173  
pharyngeal, 760, 762  
with phimosis, 560-561  
pneumococcal, 186, 189, 740  
poliovirus, 717  
postoperative. *See Postoperative infection.*  
posttransplant, 769-775  
with pressure ulcers, 733-734  
prevention of, 210, 212, 219, 235, 256  
protozoal, 71, 96, 191  
pulmonary, 111-112, 182, 289, 299-302, 304, 402, 629  
with pyomyositis, 93, 120-123  
respiratory tract. *See Respiratory tract infection.*  
ricketsial, 245  
salivary gland, 254-260  
scalp, 234, 240  
septic shock, 20  
sexually transmitted, 225, 591  
and shock, 72  
shunt, 702-706  
with sickle cell disease, 35-38
- Infection (*continued*)  
with silos, 350  
sinus, 235  
skin, 92-94, 465  
soft tissue, 92-94, 209, 212, 255, 784. *See also*  
*Necrotising fasciitis.*  
splenic, 186, 189, 230, 499-500, 502  
superficial incisional, 98  
surgical site, 3-4, 30, 98-101, 107, 409, 662, 729, 784  
throat, 234, 240  
thyroglossal, 237-238  
thyroid gland, 264  
with tissue expanders, 725  
tonsils, 760  
trachea, 283-285  
tubercular, 112, 114, 115  
typhoid fever, 103-109  
umbilical, 124-127, 352-356  
upper respiratory tract, 279-280, 651, 758  
urinary tract. *See Urinary tract infection.*  
viral. *See Viral infection.*  
wound. *See Wound infection.*
- Infecton, 115
- Inflammation, 40-41, 45, 130. *See also Infection.*
- Inflammatory bowel disease, 31, 95, 115, 443-446, 463, 489
- Inflammatory response syndrome, 68, 99
- Information and communication technologies, 780-781, 785
- Information dissemination, 85-86
- Informed consent, 77-78, 388, 555, 558, 705  
by patient, 79-80, 334, 577, 705  
in emergency operations, 79, 80
- Infratentorial tumours, 639, 641
- Inguinal hernia, 3, 152, 358-362, 364, 365, 377, 499, 529, 569, 590-591
- Injury scoring systems, 164-165, 167-169
- Injury Severity Score (ISS), 164-165, 170
- Injury, 157-161  
agricultural, 159-161  
from assaults, 159  
birth, 190, 228-231  
bites, 159  
bladder, 203-204  
blunt, 184-187, 190, 200, 202, 204  
burn, 158-160, 214-221  
from child abuse, 222-226  
classification of, 157  
colon, 187-191  
control of, 157, 159, 161  
drowning, 159, 160  
epidemiology, 157-159  
from falls, 158, 160  
genital, 206. *See also specific genital injuries.*  
inhalational, 215-216  
intentional, 159  
kidney, 202-203  
musculoskeletal, 208-212  
penetrating, 192, 200  
poisoning, 159  
prevention, 157, 159-162  
scoring, 164-170  
scrotal, 206  
spinal cord, 18, 21, 43, 194-198, 229, 430  
transport-related, 157-158, 160, 200  
unintentional, 157-159  
ureteric, 203  
urethral, 204-205  
from violence, 159  
*See also Trauma.*
- Inspissated bile syndrome, 472, 473, 477
- Intensive care, 67-73

- Internet information transfer, 86, 734, 777, 779-781, 785
- Intersex. *See* Disorders of sexual development.
- Intestinal evisceration, and omphalitis, 126
- Intestinal function, normal, 31
- Intestinal malrotation, 393-396, 418, 499  
with imperforate anus, 378-379  
*See also* Malrotation.
- Intestinal obstruction, 11, 23, 47, 376-380, 384, 412-415.  
adhesive, 108, 315, 391, 415, 446  
with aerodigestive foreign bodies, 413-414  
with annular pancreas, 491-492  
with anorectal malformation, 377  
with ascariasis, 142-143  
with Burkitt lymphoma, 606  
as cause of hypokalaemia, 28  
with colonic atresia, 437  
with Crohn's disease, 446  
with duodenal obstruction, 378, 381  
emergency surgery for, 82, 117  
with gastrointestinal duplications, 398  
with gastro-oesophageal reflux disease, 311, 315  
with herniation, 360, 362, 414  
with Hirschsprung's disease, 376, 378-379, 416, 448, 450-453  
with hydrometrocolpos, 672, 674  
with hypovolaemia, 55  
with inguinal hernia, 360, 362  
with intestinal atresia, 385-386  
due to intussusception, 389-390, 404-410  
with jejunoileal atresia, 376, 378-379, 381  
with lymphadenitis, 112  
with lymphangioma, 649  
with malrotation with volvulus, 378-379  
with Meckel's diverticulum, 389  
with meconium ileus, 376, 377-379, 401-403  
omphalocele, 349  
with parasites, 142-143, 149, 414  
postoperative complication, 294, 296, 362, 379-380, 391, 409, 598  
with radiotherapy, 617  
with sigmoid volvulus, 414  
with stoma, 431-433  
with tuberculosis, 111-113, 116-118  
due to vitelline duct anomaly, 390-391  
*See also* Bowel obstruction.
- Intestinal perforation  
and Burkitt lymphoma, 606  
as cause of free air in peritoneal cavity, 185  
dehydration and, 26, 28  
with intestinal obstruction, 377  
as a lapbelt injury, 184  
and miliary tuberculosis, 112  
and necrotising fasciitis, 418-419  
and parasitic infestations, 143  
with pneumoperitoneum, 418  
and typhoid, 103-107, 109, 412  
in utero, 379
- Intestinal transplantation, 427, 771-774
- Intraabdominal abscess, 95, 115, 124-126, 360, 390-391, 420, 441, 774
- Intraabdominal adhesions, 689, 741
- Intraabdominal bleeding, 184, 774
- Intraabdominal compartment syndrome, 349, 351
- Intraabdominal disease, 607, 611, 649, 652
- Intraabdominal herniations, 31, 182, 362
- Intraabdominal injury, 72, 176, 178, 181, 185-186, 203-204, 742
- Intraabdominal lymphadenopathy, 241-244
- Intraabdominal masses, 405, 472, 514, 539, 674
- Intraabdominal oesophagus, 310-311, 314-315
- Intraabdominal pressure, 310, 359, 361-362, 738
- Intraabdominal tumours, 414, 462, 501, 607
- Intraabdominal undescended testis, 569-571, 578-579
- Intracranial aneurysm, 194
- Intracranial haematoma, 193
- Intracranial infections, 193
- Intracranial pressure, management of, 191-192
- Intracranial trauma, due to birth method, 229
- Intrahepatic bile ducts, 483-485, 487, 495, 626, 766
- Intrahepatic biliary abscess, 769
- Intrahepatic biliary obstruction, 766
- Intrahepatic cholestasis, 35, 427, 472, 474, 477, 485, 486, 630, 766
- Intrahepatic cysts, 483, 485
- Intranasal encephaloceles, 758
- Intraosseous infusion, 49, 173
- Intraperitoneal abscess, and typhoid fever, 108
- Intrapulmonary shunt, 10
- Intravenous  
access, 71-72  
amino acids, 32  
anaesthesia, 55-57, 64  
analgesics, 218  
antibacterial, 96  
antibiotics. *See* Intravenous antibiotics.  
anticoagulants, 53, 769  
anti-inflammatories, 275  
antimicrobials, 770  
access, 64, 72, 215  
cannula placement, 11-12, 20, 105, 173  
contrast-enhanced, 176, 185, 201, 440, 492  
corticosteroids, 479  
drug abuse, 120  
as cause of drug resistance, 118  
dynamic renography, 525  
endotoxins, 379  
fluids. *See* Intravenous fluids.  
haemangiomas, 623  
immunoglobulin, 132, 500, 774  
inguinal hernia, 361  
indwelling catheter, 139  
muscle relaxant, 361  
nutrition, 325, 472  
pain relief, 63-64  
placement, 49, 53, 373  
pyelography, 610  
rib fracture, 180  
second line, 49  
sedative, 21, 56, 64, 180  
shock, 21  
technecium-99m, 477  
urography, 201, 230, 511, 519, 525, 566, 585-586, 598, 679  
variceal bleeding, 504  
vasopressors, 21
- Intravenous antibiotics, 21, 49-51, 53, 55, 697  
appendicitis, 441  
biliary atresia, 478  
bladder outlet obstruction, 586  
broad-spectrum, 93, 105, 301, 516, 520  
cholangitis, 484  
empyema, 301  
haemangiomas, 623  
haematogenous osteomyelitis, 136, 139  
hypospadias, 546  
intracranial trauma, 193  
lung abscess, 304  
lymphadenopathy, 241  
necrotizing fasciitis, 132  
Nuss procedure, 334  
omphalitis, 353  
osteomyelitis, 667  
otitis externa, 756
- Intravenous antibiotics (*continued*)  
pyomyositis, 122-123,  
rhinosinusitis, 758  
spina bifida, 702-703  
thyroiditis, 264  
tonsillitis, 760  
transplantation, 769, 772  
typhoid fever, 105, 107,  
ulcerative colitis, 445  
ureteropelvic junction stenosis, 516  
urinary tract infection, 520
- Intravenous fluids, 10-12, 21-22, 47-48, 50, 56, 739  
for ascariasis, 143  
with burns, 216  
crystalloid solutions, 27  
dextrose, 29, 32, 105  
excessive, 182  
for gastroschisis, 349  
glucose, 26, 56  
inflammatory bowel disease, 445  
intestinal obstruction, 412-414  
intussusception, 408  
mannitol, 71  
meconium ileus, 402  
necrotising enterocolitis, 418-419  
for omphalitis, 125-126  
for omphalocele, 349  
paralytic ileus, 197  
postoperative, 321  
potassium, 105  
preoperative, 395  
short bowel syndrome, 426-427  
sodium bicarbonate, 21  
in transplantations, 771  
typhoid fever, 105, 108  
warming, 174
- Intubation, orotracheal, 58
- Intussusception, 114, 142-143, 353, 376, 388-390, 404-410
- Ischaemia, 17, 34, 440, 472-476, 584  
appendix, 440  
bowel, 36, 376, 379-380, 390, 394-395, 404-405, 416, 427, 437  
cellular, 22  
central nervous system, 18  
cerebral, 26, 190, 192, 639  
granular, 554, 556  
intestinal, 127, 385-386, 388, 390, 395, 406-407, 416, 417, 747  
mucosal, 283, 372, 404, 416  
renal, 584  
stomal, 430-432  
testicular, 360, 590  
tissue, 28, 43, 524  
in transplantation, 767, 769, 772  
umbilical cord, 124  
Volkman's, 131, 211
- Ischaemic colitis, 35, 443
- Ischaemic priapism, 37
- J**
- Jaundice, 9, 472-474  
in biliary atresia, 476-477, 480-481  
cholestatic, 474, 476, 484, 490  
in cystic fibrosis, 759  
in haemolytic disease, 488, 490  
in hypothyroidism, 265  
in liver abscess, 96  
with liver tumours, 623  
obstructive, 472-474, 483-484, 503, 626  
in omphalitis, 125  
in parasitic infestation, 146, 148  
in pyloric stenosis, 369

- Jaundice (*continued*)  
 in sickle cell disease, 55  
 in spherocytosis, 500  
 in transplantation, 766, 770  
 in tuberculosis, 118  
 in typhoid fever, 104
- Jejunioileal atresia, 376, 378-379, 394
- Jejunostomy, 312-313, 325, 327, 429, 484
- Jejunum, 112-113, 325, 327, 376, 385-386, 394-395, 397, 399, 424, 426, 480, 485, 487
- Jeune's syndrome, 335-336
- K**
- Kaposi sarcoma, 151, 243, 299-302, 342, 613, 619, 621-623, 626, 630
- Kaposiform haemangioendothelioma, 623, 660, 665, 725,
- Kasabach-Merritt syndrome, 623, 657, 660, 725-726
- Kasai Roux-en-Y portoenterostomy, 476-481, 740
- Keloids, 40, 42, 215, 220
- Ketamine, for pain control, 22, 56-57, 60, 64, 106, 138, 218, 360
- Kidney  
 in Alagille syndrome, 474  
 autosomal polycystic diseases, 510-512  
 birth trauma effects on, 229-230  
 in conjoined twins, 753  
 cystic diseases, 510-512, 518, 538, 627, 673  
 duplex, 518-519, 583  
 dysplastic, 524  
 function of, 18, 23, 25, 58-59, 202-203, 206, 539, 584  
 and hypospadias, 544  
 multicystic dysplastic, 510-512, 518, 673  
 multicystic, 202, 510-512, 627, 749  
 stones, 566  
 transplantation, 766, 767, 772  
 trauma, 202-203  
 tumours, 597-600  
 and urethral valves, 539  
 and ureteropelvic junction stenosis, 513-516  
 and vesicoureteric reflux, 524-526  
*See also Renal entries.*
- Kikuchi-Fujimoto disease, 244
- Klebsiella*  
 and burn wounds, 218  
 and necrotising fasciitis, 93  
 and omphalitis, 124  
 and otitis media, 756  
 and pulmonary abscess, 304  
 and pyomyositis, 120  
 and urinary tract infection, 565
- Klinefelter syndrome, 573, 601
- Klippel-Feil syndrome, 249-250
- Klippel-Trenaunay syndrome, 648, 660-661, 665
- Kyphoscoliosis, 644, 719
- L**
- Labia, 541  
 examination of, 576, 674, 682  
 hypertrophy, 266  
 injury to, 206
- Labial adhesion, 529-530, 674, 682-683
- Labial agglutination, 682-683
- Labial bulge, with hernia, 359
- Ladd's bands, 381, 394-396
- Ladd's procedure, 294, 379, 395-396, 740-741
- Laparoscopic drainage of hydatid cysts, 148
- Laparoscopic fundoplication, 315-316, 741
- Laparoscopic repair of perforated ulcer, 374
- Laparoscopic retrieval of ingested foreign body, 331
- Laparoscopy, 738-743  
 achalasia, 321  
 advantages of, 38, 489, 742  
 with Anderson-Hynes technique, 515  
 in antireflux surgery, 315, 320  
 for appendicitis, 440-442, 739-740, 743  
 in biliary atresia, 477  
 cholecystectomy, 473, 489-490, 740  
 for choledochal cyst excision, 485  
 complications with, 741-742  
 in congenital diaphragmatic hernia repair, 294  
 in diagnostic evaluation of suspected intraabdominal organ injury, 185  
 in disorders of sex development, 577-578  
 for duodenal obstruction, 382  
 equipment for, 739  
 ethical issues, 742  
 for gastrointestinal duplications, 398-399  
 gastronomy, 325  
 gastrostomy, 429  
 for hernia, 362-365  
 in Hirschsprung's surgery, 451-452, 741  
 for inflammatory bowel disease, 445  
 for intussusception, 409  
 Ladd's procedure, 740-741  
 in liver biopsy, 504  
 for liver cysts, 626-628  
 malrotation, 740-741  
 oesophagomyotomy, 320  
 for ovarian lesions, 689  
 with ovarian teratoma, 602  
 with Palomo's operation, 592  
 physiological changes due to, 738-739  
 pyloric stenosis, 370  
 pyloromyotomy, 740  
 for resection of Meckel's diverticulum, 391  
 splenectomy, 501, 502, 740  
 thoracoscopy, 740  
 in treatment of bladder outlet obstruction, 587  
 in tuberculosis identification, 115  
 in undescended testis exploration, 570-571  
 for uterine anomaly, 679-680  
 for vitelline remnants, 391
- Laparotomy, 113, 185, 419  
 in abdominal trauma, 176, 178, 181-182, 184, 185-188, 189, 190, 200  
 with adrenal gland biopsy, 230  
 for anastomotic leakage, 108  
 for anterior rectal duplications, 399  
 assisted retrieval of ingested foreign body, 331  
 for bezoans/foreign bodies, 412, 414  
 for bladder trauma, 204  
 with bowel surgery, 419-420, 431  
 for complications of gastrointestinal stomas, 431  
 to diagnose tuberculosis, 113, 115-116  
 for diagnostic peritoneal lavage, 184  
 for diaphragmatic injuries, 182  
 for disorders of sex development, 576-578  
 for duodenal obstruction, 382, 492  
 for external compression, 412  
 for gallbladder, 107  
 in gastrojejunostomy, 313  
 for Hirschsprung's disease, 379  
 for hydrocolpos perforation, 675  
 for ileosigmoid knotting, 412, 414, 415  
 for internal herniation, 412  
 for intestinal malrotation, 395  
 for intestinal obstruction, 108, 391, 413-415  
 in intraabdominal trauma, 204  
 in intravenous urography, 201  
 for intussusception, 406-407, 409  
 in Ladd's procedure, 395  
 for liver cysts, 628
- Laparotomy (*continued*)  
 for liver tumours, 629  
 in lymphoma, 607  
 with malrotation, 395  
 in meconium ileus, 379  
 for necrotising enterocolitis, 419-421  
 for necrotising fasciitis, 130  
 for parasites, 412, 414  
 for perforation identification, 108  
 for peritoneal adhesions, 412  
 for peritonitis, 107-108, 126-127, 379, 703  
 for polyp removal, 461  
 and postoperative adhesions, 412  
 versus primary peritoneal drainage, 419  
 for pyocolpos or hydrocolpos, 675  
 for rectal bleeding, 390  
 for rectal duplications, 399  
 for renal trauma, 202  
 for sigmoid volvulus, 412, 414, 415  
 in transplantation, 767  
 for vitelline remnants, 391  
 for volvulus, 382, 395
- Laryngeal abnormalities, 760-761
- Laryngeal atresia, 288
- Laryngeal cleft, 273, 278, 284
- Laryngeal collapse, 273
- Laryngeal cyst, 273
- Laryngeal disease, 242
- Laryngeal dislocation, 195
- Laryngeal infection, 761-762
- Laryngeal lesions, 760
- Laryngeal mask airway, 57-58, 67, 251, 284
- Laryngeal nerve, 236, 267, 278, 653-654
- Laryngeal occlusion, 255
- Laryngeal oedema, 93, 273, 653
- Laryngeal papillomatosis, 762
- Laryngeal spasm, 362
- Laryngeal trauma, 274, 276, 762
- Laryngeal web, 278, 763
- Laryngomalacia, 273, 278, 284, 760-761
- Laryngopharyngeal reflux disease, 760
- Laryngoscope, 57-58, 272-275, 276, 280
- Laryngoscopy, 58, 272-274, 278, 761-762, 763
- Laryngospasm, 59-60
- Laryngotracheobronchitis, 279, 280, 761-762
- Larynx, 58, 67, 172, 234, 236-237, 239, 287, 615, 760-763. *See also Laryngeal entries.*
- Le Forte osteotomy, 728
- Leiomyosarcoma, 618
- Ligament of Treitz, 382, 394, 413, 478, 480
- Lingual thyroid, 263, 272
- Lipoblastoma, 338, 619, 665
- Lipofibromatosis, 666
- Lipomeningocele, 700
- Liposarcoma, 614, 616, 619, 621
- Littre's hernia, 361, 390
- Liver, 9, 58-59, 184, 487, 504, 622-630  
 and abdominal wall defects, 348  
 abscess, 96, 103, 124-126, 141-143, 353, 627  
 and biliary atresia, 476-481, 766-767  
 and biliary hypoplasia, 473-474  
 biopsy, 473-474, 477, 483, 504, 506, 626, 689  
 birth trauma, 229-231  
 cholestatic disorders of, 472-474, 476-477, 766-767  
 cirrhosis, 40, 42, 299, 342, 504, 506, 626  
 conjoined twins, 751, 753  
 cysts, 511, 627  
 disease, 35, 115, 141, 473, 481, 503-506, 512, 626-627, 766-767, 775  
 enlarged, 35, 610  
 failure, 20, 24, 427, 442, 472, 476, 480, 506, 511, 766-767  
 fibrosis, 472, 474, 483-485, 504

- Liver (*continued*)  
 function tests, 33, 96, 116, 118, 142, 201, 477, 485, 503, 616, 623, 773  
 and Gaucher's disease, 501  
 and glandular fever, 281  
 and glucose, 26  
 herniated, 293  
 injury, 180, 184-186, 229-230, 315, 741  
 parasitic infestations, 145-148  
 resection, 627-629  
 transaminases, 35  
 transplantation, 380, 427, 476, 479-480, 485, 504-507, 619, 625-626, 725, 766-772, 775  
 tumour, 47, 597, 603, 610, 619-620, 622-630, 641, 649, 767  
*See also Hepatic entries.*
- Lung, 14-16  
 abscess, 304-305  
 auscultation of, 58-59, 173, 176  
 bacilli in, 111-112  
 bronchogenic cysts, 238, 289  
 chronic sepsis, 319  
 collapse, 181, 279, 300  
 congenital lesions, 287-290  
 cystic lesions, 287-290, 292, 747-748  
 disease, 68-69, 295  
 empyema, 299-301, 740  
 expansion, 9-10, 14, 294, 301, 336, 343  
 and Gaucher's disease, 501  
 hypoplasia, 343  
 injury to, 52, 69, 72, 73, 180-181, 340  
 metastases, 606, 618-620, 624-625  
 parasites in, 143, 145, 147-148  
 parenchyma, 181, 289, 300, 304, 701  
 physiology, 9-10, 14-16, 18, 68-69  
 and pyomyositis, 122  
 and sickle cell disease, 38  
 and tuberculosis, 111-113, 116  
 tumours, 597, 606, 618-620  
 ventilator-associated injury, 69, 216  
*See also Pulmonary entries.*
- Lymphadenitis, 92, 96, 112, 240-247, 304, 362
- Lymphadenopathy, 240-247  
 with congenital lobar emphysema, 289  
 with Crohn's disease, 444  
 with glandular fever, 281  
 with Kaposi sarcoma, 619  
 with ovarian lesions, 687  
 posttransplantation, 771  
 with synovial sarcoma, 618  
 with tuberculosis, 112, 114, 117, 118, 241-242, 247, 339  
 with unilateral limb enlargement, 666
- Lymphangiography, 343, 732
- Lymphangiomas, 238, 256, 288, 338, 342, 360, 362, 633, 648-654, 726
- Lymphoedema, 342, 648, 664-667, 726, 732
- Lymphoma, 605-608  
 brain, 639  
 as cause of neck lumps, 234-235  
 and chylothorax, 342  
 and intussusception, 404  
 with lymphadenopathy, 240, 243-246  
 mediastinal masses, 338-341  
 spleen, 501  
 stertor, 277  
 symptoms similar to other diseases, 114-115, 152, 244, 637, 771  
 WHO classification, 640  
*See also* Burkitt lymphoma, Hodgkin's disease, Non-Hodgkin's lymphoma.
- Lymphoproliferative disorder, 243-244, 372, 769-770, 773-774
- Lymphoscintigraphy, 343, 667
- M**
- Maffucci syndrome, 634, 648, 660, 685
- Magnetic resonance imaging. *See* MRI.
- MAGPI technique, 542, 547-548
- Malnutrition, 71, 97  
 and achalasia, 319  
 and annular pancreas, 491  
 and associated infection, 211, 362, 583, 712  
 and burns, 220  
 and chylothorax, 343  
 and hernias, 355, 432  
 in Hirschsprung's disease, 448  
 and inflammatory bowel disease, 444  
 and liver disease, 476, 479, 766-767, 775  
 and malrotation, 394  
 management of, 31-32, 94  
 and necrotising fasciitis, 129, 131, 133  
 neonatal, 10, 376-377, 380  
 and noma, 730  
 and otitis media, 756, 763  
 and parasitic infestations, 141-142  
 pathophysiology, 30-31  
 and typhoid fever, 107, 109  
 and tuberculosis, 113, 117  
 and wound healing, 211, 362, 714
- Malrotation, 311-312, 349, 351, 381-385, 387, 390, 476, 499  
 bowel, 437  
 intestinal, 393-396, 418, 499  
 Ladd's procedure, 294, 379, 395-396, 740-741  
 with volvulus, 311, 376-379, 386, 393-396, 418
- Mannitol, 171, 174, 192, 641
- Mantoux test, 113, 114, 117, 242, 245-246, 339
- Marjolin's ulcer, 220, 667, 733
- Masks, for airway maintenance, 57-58
- Mathieu technique, 548-549
- McCusick-Kaufman syndrome, 673
- Measles, 243, 245, 254, 494, 667, 757
- Meatal amputation, 206
- Meatal anomaly, 529-530
- Meatal stenosis, 546, 551, 557, 560-563, 565
- Meatal ulceration, 554
- Meatoglanuloplasty, 542, 546
- Meatus, urethral, 177, 201, 205, 528-529, 541-552, 555, 562
- Meconium ileus, 376-379, 386, 388, 401-403, 412. *See also* Cystic fibrosis.
- Mediastinal abscess, 241, 327
- Mediastinal compression, 284
- Mediastinal inflammation, 342
- Mediastinal injury, 72, 180
- Mediastinal lesion, 339-340
- Mediastinal lymphadenopathy, 242, 244, 338
- Mediastinal lymphangioma, 649-650
- Mediastinal mass, 112, 283, 284, 289, 338-341, 605-606, 610-611, 740
- Mediastinal nodes, 111, 112, 244-245, 247
- Mediastinal shift, 291-292, 294, 336, 343, 739, 747
- Mediastinal teratoma, 601, 603
- Mediastinal tuberculosis lymphadenitis, 112
- Mediastinal tumour, 238, 340, 607, 609, 741
- Medulloblastoma, 639-642
- Megacolon, 142, 376, 445, 448-451
- Meleney's gangrene, 93-94, 129
- Meningitis, 70, 93, 96, 112, 117-118, 190, 193, 339, 399, 699, 705, 757
- Meningocele, 582-583, 700
- Meningococcaemia, 225
- Meningococcus, 38, 501, 502, 757
- Microcolon, 376, 378, 402
- Microcolony, 278, 761, 763
- Microsurgery, 641, 734
- Microtia, 756-757
- Micturating cystourethrogram, 511, 519, 524-525, 539, 583-587, 592, 704
- Minimal access surgery, 211, 412, 738-743. *See also* Minimally invasive surgery.
- Minimally invasive surgery, 308, 415, 521, 567, 742. *See also* Minimal access surgery.
- Molestation, injury from, 159
- Mononucleosis, infectious, 241, 243-245, 281, 760, 770. *See also* Glandular fever.
- Morgagni hernia, 291-293, 338, 601
- Morphine, 21, 63-64, 71, 174, 177, 180, 335
- MRI, 176, 616, 695, 738  
 for arteriovenous malformations, 661-662  
 for avascular necrosis, 36  
 for birth injuries, 229  
 for bladder outlet obstruction, 584-586  
 for bone tumours, 633-634, 636  
 for brain and spinal cord tumours, 640-645  
 for cervical teratomas, 603  
 for congenital diaphragmatic hernia, 291  
 in conjoined twins, 750-751, 73  
 for detecting foreign bodies, 329, 331  
 for gastrointestinal duplications, 398  
 for haemangiomas, 658  
 for hydrocephalus, 193  
 for intracranial trauma, 191, 193, 195, 229  
 for intussusception, 407  
 for kidney evaluation, 511, 598  
 of liver masses, 504, 623-624, 628  
 for lymphangioma, 650-652  
 for lymphoma, 606  
 for mediastinal masses, 339  
 for nasopharyngeal carcinoma, 758-759  
 for necrotising enterocolitis, 418  
 for necrotising fasciitis, 131  
 for neuroblastoma, 610-611  
 for osteomyelitis, 36, 136  
 for ovarian lesions, 687  
 for pancreas, evaluation, 492  
 for parasitic infestations, 142  
 prenatal, 291, 650, 674, 746-749  
 for pyomyositis, 121  
 in reconstructive surgery, 726  
 for reproductive tract anomalies, 679-680  
 for rhabdomyosarcoma, 615  
 for sacrococcygeal teratoma, 748  
 for salivary gland diseases, 255-256, 258-259  
 for sex development evaluation, 576  
 for spina bifida, 701  
 for synovial sarcoma, 618  
 for thyroid gland, 262  
 for tracheomalacia, 284  
 for transverse septum, 674  
 for traumatic head injury, 191, 193, 195  
 for unilateral limb enlargement, 666-667  
 for ureteric junction stenosis, 514-515  
 for urethral evaluation, 538
- Mucocele, 254, 257
- Mucor, 756, 771
- Müllerian duct anomaly, 678-679, 681
- Müllerian structures, 544, 569-570, 573-574, 576, 590
- Mumps, 245, 254, 256, 494, 667, 757
- Muscle relaxants, 22, 55, 57-58, 71-72, 284, 458, 489, 587
- Musculoskeletal deformities, 249, 681, 704, 710, 753-754
- Musculoskeletal examination, 177, 184, 706
- Musculoskeletal injury, 208-212, 223-224, 709-710, 716
- Myelogram, 196
- Mycobacterial infection, 43, 115, 117-118, 242, 299, 300. *See also specific Mycobacteria.*

- Mycobacterium avium*, 111  
*Mycobacterium bovis*, 111, 112, 246  
*Mycobacterium tuberculosis*, 95, 96, 111-114, 117-118, 240-241, 246, 247, 665  
*Mycobacterium* sp., 120  
*Mycoplasma pneumoniae*, 299  
 Myelomeningocele, 26, 28, 467, 529, 601-602, 694, 699-700, 702, 705, 710, 761  
 Myiasis, 141, 146-147  
 Myocardial contusion, 182  
 Myths, 33, 152, 697. *See also* Cultural factors.
- N**
- Narcotics, 22, 56, 59, 218, 567, 703, 771  
 Nasopharyngeal angiofibroma, 726, 759  
 Nasopharyngeal carcinoma, 243, 759  
 Nasopharynx, 68, 272, 615-616, 651, 726, 729, 758-760  
 Neck, 234-239, 248-253  
   branchial arches, 234-237, 239  
   bronchogenic cysts, 238  
   and Burkitt lymphoma, 759  
   and burn injuries, 177, 215, 217, 219  
   carbuncles, 93  
   cold abscess, 95-96  
   cysts, 235-239  
   embryology, 234-237, 239  
   with fibrous dysplasia, 731  
   fistulas, 234, 236, 239  
   furuncles, 92  
   glands, 281  
   haemangiomas, 657-659, 726-727  
   incisions for surgery, 307-308, 326  
   lumps in, 234, 239  
   and lymphadenopathy, 240, 243-246  
   lymphangiomas, 238, 648-654  
   masses in, 234-235, 238, 242, 262, 266, 273, 603, 759  
   midline cervical clefts, 237  
   and necrotising fasciitis, 129  
   and salivary gland diseases, 257-259  
   and Sandifer's syndrome, 311  
   sinuses, 234-239  
   thyroglossal cysts, 237-239  
   and thyroid gland, 262-263, 266-267  
   in trauma scores, 165-169  
   tumours, 237, 437, 601, 607, 609, 613-620  
 Necrotising enterocolitis, 31, 95, 125, 416-421, 424, 427, 473, 487, 490, 751-752  
 Necrotising fasciitis, 93-94, 129-133  
   debridement, 126, 129, 132-133, 353  
   following circumcision, 556  
   Meleney's gangrene, 94  
   and omphalitis, 124-127, 353  
   at surgical site, 100  
*Neisseria*, 120  
 Neonatal intensive care unit, 5, 25, 308, 312, 349, 380  
 Neonates, 8-13  
   acute scrotum, 590-592  
   airway management, 57-58, 277, 311  
   anaesthetics, 55, 59  
   anorectal malformations, 455  
   biliary atresia, 476-481  
   bilirubin, 487  
   birth injuries, 190, 228-231  
   bladder exstrophy, 528-530, 536  
   bladder outlet obstruction, 584, 586  
   bleeding tendency, 484  
   and blood transfusions, 27, 132  
   bowel obstruction, 385, 401. *See also* Meconium ileus.  
   and bradycardia, 28, 311  
   cardiac output, 18, 22  
   Neonates (*continued*)  
     cardiovascular function, 9-10, 55, 60, 70  
     chest wall deformity, 335-336  
     choledochal cyst, 484-486  
     cholestasis, 472-474, 476, 481, 766  
     chylothorax, 343  
     circumcision, 78-79, 554-556  
     classification of, 8, 9  
     clinical evaluation, 10  
     clubfoot, 704, 710  
     congenital diaphragmatic hernia, 291-293  
     congenital goiter, 263, 266  
     cystic kidney disease, 510-512  
     cystic fibrosis, 401-403  
     diaphragmatic eventration, 295  
     disorders of sex development, 576  
     epispadias, 528  
     fluids and electrolyte management, 23-29  
     gastroschisis, 349  
     hepatitis, 477, 481, 766  
     and Hirschsprung's disease, 449-452  
     and HIV/AIDS, 152-153  
     hydrocele, 363  
     hydrocephalus, 704-706  
     hydrometrocolpos, 672-676  
     hyperglycaemia, 11, 60  
     hypoglycaemia, 11, 60  
     hypothermia, 28, 131  
     hypothyroidism, 265  
     immune function, 11  
     inguinal hernia, 360  
     intestinal obstruction, 47, 376-380, 381, 384, 386, 437, 450, 491-492  
     intussusception, 410  
     jaundice, 472, 476-477, 481, 484  
     laryngomalacia, 278  
     liver disease, 473, 487, 766-767  
     liver transplantation, 480  
     liver tumours, 623, 628  
     lung disease, 295  
     lymphadenopathy, 243-244  
     lymphangioma, 651, 653  
     malrotation, 394-396  
     mechanical ventilation, 69  
     meconium ileus, 401-403  
     meconium plug, 451  
     meningitis, 699, 705  
     minimal access surgery, 739  
     necrotising enterocolitis, 416, 420  
     necrotising fasciitis, 131-132  
     nutrition, 10-11, 30-31, 56, 420  
     and omphalitis, 124-127, 352-353  
     omphalocele, 349  
     ovarian lesions, 686, 688  
     pain control, 62-63  
     palpable abdominal mass, 511, 517  
     peptic ulcer disease, 372  
     peripheral vascular access sites, 47-48  
     peritonitis, 433  
     physiology, 8-11, 13, 14-16, 23-24, 60, 385, 761  
     predictable problems, 9  
     pull-through, 451  
     renal function, 23-25, 55  
     respiratory function, 10, 55, 57, 60  
     screening programmes, 265  
     sepsis, 705  
     septic shock, 73  
     short bowel syndrome, 424, 427  
     subglottic stenosis, 278, 762  
     surgical site infection, 99  
     temperature regulation, 55-56  
     tetanus, 353  
     torsion of the testis, 590, 592  
   Neonates (*continued*)  
     tracheostomy, 651  
     transportation of, 5, 11-12, 784  
     tumours, 601-604, 609, 614, 639, 748  
     ventilation, 311  
     vital signs, 173  
     wound healing, 44  
 Nephroblastoma, 597, 610  
 Neuroblastoma, 230, 243, 339-340, 342, 582-583, 609-612, 616, 634, 640, 641  
 Neurodisability, 420, 699-706  
 Neurofibroma, 254, 259-260, 339, 390, 640, 644, 665-666  
 Neurofibromatosis, 448, 583, 584, 614, 618, 620, 642, 665, 731-732  
 Neurofibrosarcoma, 618-619  
 Neurogenic bladder dysfunction, 582, 584, 586, 704-705  
 Neurogenic shock, 19, 21  
 Neurogenic tumours, 339, 618, 665  
 Neurologic abnormality, 14, 70-71, 165, 228, 747  
 Neurologic deficit, 192, 195-196, 228-229, 295, 304, 310, 639, 641-642, 644-645, 700, 704, 715, 729  
 Neurologic examination, 165, 172, 174, 176-177, 191, 197, 215, 710, 717, 729  
 Neurologic impairment, 310-317, 329, 709, 717  
 Neurologic injury, 25, 190-191, 228-229, 231, 662, 767  
 Neurosurgical procedures, 26, 71, 192, 753, 758-759  
 Neutrophils, 11, 41-43, 95, 100, 105, 121, 124, 141, 241, 300, 352, 416, 420, 440  
 Noma, 129-130, 730-731  
 Noma vulva, 93-94  
 Non-Hodgkin's lymphoma, 243, 338, 605, 608, 759  
 Nonossifying fibroma, 633, 635  
 Noonan syndrome, 264, 342, 343, 649  
 Nose, 756-760, 763  
   and airway obstruction, 277, 727-728  
   Alagille syndrome, 474  
   and cleft lip and palate, 728  
   and face mask fitting, 57, 68  
   flattened, as sign of renal function issues, 24  
   haemangiomas, 657-658  
   infections, 93, 240  
   and necrotising fasciitis, 132  
   and reconstructive surgery, 728-731  
 Nosocomial infections, 94, 99  
 NPO guidelines, 26-27, 55-56, 60, 293, 773-774  
 Nucleic acid technique of tuberculosis testing, 114  
 Nuss procedure, 4, 334-335, 337  
 Nutrition, 30-33  
   deficiency, 56, 68, 92, 97, 100, 113, 120, 293, 304, 343, 641, 699, 704, 712, 756  
   deficit, 321, 424-427, 694-695  
   deprivation, 31-32, 222  
   enteral. *See* Enteral nutrition.  
   ethical issues related to, 32, 33, 388, 427  
   with intestinal transplantation, 771  
   intravenous, 325  
   jejunal, 496  
   maternal, 754  
   neonatal, 10-11  
   in omphalocele and gastroschisis, 349  
   parenteral. *See* Parenteral nutrition.  
   postoperative needs, 387, 395, 479, 697  
   pretransplant, 767, 775  
   role in wound healing, 43-44, 362, 714  
   status, 30-33, 72, 99, 200, 302, 320, 350, 457, 468, 599, 771  
   support, 30-33, 47, 72, 122, 132, 217, 628, 766  
   total parenteral. *See* Total parenteral nutrition.

- Nutrition (*continued*)  
 use of gastrostomy, 651  
 vascular access for, 47  
 venous access for, 50  
 Nutritional drain, due to parasitic infestations, 142-143  
 Nutritional myths, for pregnant women, 33  
 Nutritional outcomes, monitoring of, 32  
 Nutritional pancreatitis, 494  
 Nutritional rehabilitation, 730, 733  
 Nutritional rickets, 709, 718-719, 721
- O**
- Oesophageal atresia, 5, 72, 276, 283, 285, 286, 306-311, 329, 342, 390, 491, 741, 748  
 Oesophagitis, 310-311  
 Oesophagogastroduodenoscopy, 312, 373, 375, 382, 462  
 Oesophagomyotomy, 320-321, 740  
 Oesophagoscope, 275, 276, 330  
 Oesophagoscopy, 272, 273, 275-276, 330  
 Oesophagus  
 achalasia, 319-321  
 Barrett's oesophagus, 311-313, 315-316  
 and broncho-oesophageal fistula, 273  
 and bronchopulmonary malformations, 289  
 carcinoma, 319, 327, 429  
 and corrosive ingestion, 323-325  
 dilatation, 275-276, 312-313, 319, 320, 325, 504-505, 741  
 duplications, 397-398  
 embryology, 287, 291, 306  
 foreign object in, 275, 278, 329-331, 413  
 infections of, 299  
 injury, 181, 230, 323-325  
 and parasitic infestation, 143  
 perforation, 299, 315, 320-321, 323-328  
 physiology, 310, 319  
 and pneumothorax, 181  
 reconstruction of, 325-328  
 reflux, 368  
 replacement of, 323, 325-328  
 and tracheomalacia, 283-285  
 and tracheo-oesophageal fistula, 284-286, 306-307, 491, 741, 748  
 and tuberculosis, 112, 113  
*See also* Gastro-oesophageal reflux disease, Oesophageal atresia.
- Omphalitis, 93, 124-127, 352-353, 356  
 Omphalocele, 348-352, 356, 359, 390, 393, 603, 751  
 Omphalomesenteric duct, 352-354, 356, 376, 389-390  
 Omphalomesenteric fistula, 353, 389  
 Omphalopagus twins, 750-752  
 Open fractures, 208-212, 709, 712-714, 720, 721  
 Opioids, 57, 59, 64, 71, 332  
 Orchiopexy, 569-571  
 Orogenital sinus anomalies, 582-583, 673, 753  
 Oropharynx, 16, 172, 235, 241, 323, 398, 615, 760, 763  
 Orthopaedic diseases, 709-721. *See also specific diseases.*  
 Ossicular malformations, 757  
 Osteoblastoma, 633-635, 665  
 Osteochondro dystrophy, 335  
 Osteochondroma, 633-635, 638, 660, 665  
 Osteofibrous dysplasia, 633  
 Osteogenic sarcoma, 614  
 Osteogenic bone tumours, 633  
 Osteolysis, 634, 635, 640, 666  
 Osteoma, 463, 633-636, 665  
 Osteomyelitis, 49-50, 135-140, 535, 633-634, 636-637, 666-667
- Osteomyelitis (*continued*)  
 acute, 36, 121-122, 136, 665-666  
 causes, 173, 210-211  
 chronic, 36, 135-137, 139-140, 709, 713  
 classification, 136  
 diagnosis of, 36  
 haematogenous, 135-140, 665, 712, 721  
 and limb enlargement, 665-667  
 management, 36  
 and necrotising fasciitis, 131  
 pathology, 135  
 posttraumatic, 712-714  
 prevention of, 712-714, 721, 733  
 and pyomyositis, 121-122  
 septic, 139-140  
 treatment of, 136-138, 667  
 tubercular, 116  
 and typhoid fever, 103-104, 107  
 vertebral, 250
- Osteonecrosis, 36  
 Osteopaenia, 36, 224, 625  
 Osteoporosis, 574  
 Osteosarcoma, 613, 633-637, 665, 731  
 Osteotomy, 332, 530-531, 535, 536, 717, 719, 728, 752-754  
 Ostomy, 30, 379, 419, 430-433, 773. *See also* Stoma.
- Otitis externa, 756  
 Otitis media, 139, 756, 759, 763  
 Otorhinolaryngology, 756-763  
 Ovarian cancer, 685-688  
 Ovarian cyst, 484, 649, 685-691  
 Ovarian disorder, 573, 576  
 Ovarian lesions, 685-691  
 Ovarian remnant syndrome, 689  
 Ovarian tumour, 243, 462, 601-602, 685-691  
 Ovary, 358, 360-362, 574, 672, 678
- Oxygen,  
 administration of, 12, 59, 67-69, 73, 105, 195, 641  
 affinity for, 14-15, 56  
 concentration, 9-10, 16, 68, 105, 173  
 consumption, 9, 55, 57, 214  
 delivery, 19-22, 44, 55, 68-69  
 demand, 20, 68, 214  
 hyperbaric, 132, 212, 215  
 masks, 68, 173, 280  
 requirements, 10, 24, 57, 68-69, 277, 293  
 saturation, 21, 37, 55, 59, 173, 293, 495  
 supplemental, 10, 16, 20, 56, 68, 172-173, 176, 284, 301, 651  
 therapy, 15, 69, 93, 194  
 in transplantation, 767-768, 773  
 uptake, 14
- Oxygenation, 15, 28, 38, 68-72, 93, 194, 274, 649, 767  
 cerebral, 192  
 extracorporeal membrane, 293-295  
 index, 293  
 maintenance, 21  
 in primary survey, 172, 177  
 in thoracic trauma, 181
- P**
- Paediatric (Adelaide) Scale, 192  
 Paediatric Advanced Life Support, 173  
 Paediatric Trauma Score (PTS), 167, 168, 170  
 Pain, 61-65  
 with abdominal trauma, 184, 186-187  
 with achalasia, 319  
 anaesthesia relief, 59-60, 64, 361, 467, 555, 558  
 analgesia relief, 10, 37-38, 59, 63-64, 71-72, 174, 176, 180, 256, 466-467, 532, 555
- Pain (*continued*)  
 with anorectal conditions, 465-467  
 with appendicitis, 104, 440  
 with arteriovenous malformations, 661  
 with bone tumours, 634-636  
 with burns, 177, 215, 218, 697  
 chest, 112, 300, 304, 323, 328, 332-333  
 with chest wall deformities, 332-333, 335  
 with child abuse, 225  
 with choledochal cyst, 483-484, 488  
 with clubfeet, 710-711  
 control, postoperative, 38, 467, 713, 716  
 with craniofacial tumours, 731-732  
 with dentigerous cyst, 731  
 with duplications, 398  
 with Fournier's gangrene, 94  
 with gallstones, 488-489  
 with gastro-oesophageal reflux disease, 311  
 with haemangiomas, 658  
 with haematogenous osteomyelitis, 135-136  
 with hydrometrocolpos, 672-674  
 with hypercalcaemia, 197  
 with hypospadias, 542, 546, 549  
 importance of control, 62  
 with inflammatory bowel disease, 444  
 from ingested caustics, 323-324, 328  
 with inguinal hernia, 359  
 intermittent, 394  
 with internal herniation, 412  
 with intestinal malrotation, 394  
 with intestinal obstruction, 412, 414  
 with intussusception, 405-406  
 with jaundice, 472  
 with kidney disease, 511  
 with limb enlargement, 666  
 with liver tumour, 626-627  
 with liver abscess, 96, 142  
 with lung abscess, 304  
 with lymphangiomas, 649, 653  
 with lymphoedema, 732  
 management, 45, 59, 61-65, 84, 177, 209, 218-219, 717, 773  
 with meatal stenosis, 562  
 with mediastinal lesions, 339  
 with minimal access surgery, 738, 740-742  
 with musculoskeletal trauma, 177, 208-210  
 neck, 191, 195, 281  
 with necrotising fasciitis, 94, 130-132  
 negative-pressure therapy, 725  
 with neuroblastomas, 610-611  
 with noma, 730  
 nonpharmacological techniques of management, 63  
 opioid relief, 59  
 with otitis media, 756  
 with ovarian lesions, 686, 688-690  
 with pancreatitis, 492, 495-498  
 with paraphimosis, 563  
 with parasitic infestations, 142-147, 414  
 with peptic ulcer disease, 372-375  
 with phimosis, 560-561  
 with pleural effusion and empyema, 300-302  
 with polyps, 461-463  
 with postpolio syndrome, 717  
 with pyomyositis, 121-123  
 referred, 181  
 responsiveness to, 19  
 with retropharyngeal abscess, 281  
 with salivary gland disease, 256  
 scales, 62-63, 65, 166  
 scrotal, 590-593  
 with septic arthritis, 139  
 with shunt failure, 702  
 with sickle cell disease, 34-36, 500

- Pain (*continued*)  
 as sign of infection, 98  
 as sign of inflammation, 49, 93  
 with spinal cord tumours, 644  
 splenic, 35, 499-501, 505  
 splinting for, 717  
 stress due to, 82-83  
 with surgical site infection, 98-99  
 with swallowing, 319  
 and tachycardia, 69-70, 173  
 and tachypnea, 19  
 with teratomas, 602-603  
 with thoracic trauma, 181  
 with thyroiditis, 264  
 with tissue expanders, 725  
 with transplantation, 773  
 with tuberculosis, 112-114, 116  
 with typhoid fever, 104, 107-108  
 with urachal anomalies, 354  
 with ureteric injuries, 203  
 with ureteropelvic junction stenosis, 514-515  
 with urolithiasis, 566-567  
 with urinary tract infection, 519-520, 524  
 with uterine anomalies, 679-681  
 with vitelline duct anomalies, 390-391  
 in wound healing, 44-45
- Pancreas, 184, 398  
 aetiology, 484, 491, 499  
 anastomotic leaks, 308  
 annular, 376, 381-382, 491-495  
 cancer, 461-462, 497  
 in cholelithiasis, 487, 490  
 in congenital diaphragmatic hernia, 293  
 ectopic, 389-391, 404  
 enzymes, 402, 412, 414  
 and gastroschisis, 349  
 injury to, 184, 383, 501  
 in intensive care, 70, 72, 379  
 in intestinal atresia, 383, 387  
 and jaundice, 472-475  
 and necrotising enterocolitis, 419-420  
 and omphalitis, 125-126  
 parasitic infestation, 143  
 peripheral vascular access, 47, 49-50, 52  
 secretions, 424, 427  
 and short bowel syndrome, 395, 42-427  
 and short gut syndrome, 379  
 and transplantation, 771  
 and tuberculosis, 112, 115  
 tumour in, 390, 603, 657  
 and typhoid fever, 107
- Pancreaticobiliary junction, 483-484  
 Pancreatitis, 35, 103, 398, 473, 484-489, 494-498  
 Papilloma, 272-274, 468, 644, 699, 762  
 Paraphimosis, 554, 558, 562-563  
 Parasites, 71, 120, 141-149, 355  
 and acute pancreatitis, 494  
 and appendicitis, 440  
 and intestinal obstruction, 412, 414-415  
 and liver, 623, 627  
 and lymphoedema, 732  
 and rectal prolapse, 467  
 and spleen, 500  
 and unilateral limb enlargement, 664-667
- Parasitic twins, 750-754  
 Parastomal hernia, 430-432, 457  
 Parathyroid gland, 236, 237, 239, 262, 265, 267, 338  
 Paratidectomy, 258-259  
 Parenteral antibiotics, 36, 100, 126, 132, 209, 651  
 Parenteral nutrition, 30-32  
 and anastomotic leaks, 308  
 in annular pancreas, 492  
 in cholelithiasis, 487, 490
- Parenteral nutrition (*continued*)  
 in congenital diaphragmatic hernia, 293  
 to correct bleeding tendency, 484  
 and gastroschisis, 349  
 in intensive care unit, 70, 72, 379  
 in intestinal atresia, 383, 387  
 and necrotising enterocolitis, 419-420  
 in obstructive jaundice, 472-473  
 in omphalitis, 125-126  
 in pancreatitis, 496  
 and peripheral vascular access, 47, 49-50, 52  
 and short bowel syndrome, 395, 426-427  
 and short gut syndrome, 379  
 in transplantation, 771  
 in typhoid fever, 107
- Parke-Weber syndrome, 660, 665  
 Parotid, 235, 254-260, 603, 653  
 Parotidectomy, 258-259  
 Parotitis, 254, 256-257  
 Parovarian cyst, 688  
*Pasteurella multocida*, 241  
 Pectus carinatum, 294, 332-334, 719  
 Pectus excavatum, 4, 333-337, 740  
 Penis, 3, 205, 206, 225, 529, 532, 535, 541-552, 554-555, 557, 560-562, 574  
 carcinoma, 554-561  
 raphe, 455-456, 541, 543  
 rotation, 532, 541, 551  
*See also* Chordee, Glans, Hypospadias, Meatus.
- Peptic ulcer disease, 372-375, 398-399, 489  
*Peptococcus* sp., 241  
*Peptostreptococcus*, 93, 124, 130, 241  
 Pericardial defect in pentalogy of Cantrell, 292, 747  
 Pericardial disease, 17  
 Pericardial effusions, 93  
 Pericardial fluid, 184  
 Pericardial tamponade, 53, 176, 182  
 Pericardial tears, 182  
 Pericardial window, in thorascopy, 343  
 Pericarditis, 116, 122, 241, 335  
 Pericardium, 182, 234, 285, 338, 348  
 Perineum  
 and anorectal or urogenital malformations, 455-457, 465, 529, 673-674  
 embryology, 673  
 examination in trauma patient, 177, 187, 200-201, 204-205  
 hygiene, 682-683  
 injury, 200-206, 225  
 and necrotising fasciitis, 93, 132, 465
- Peritoneal adhesions, 126-127, 412  
 Peritoneal fluid, 105-107, 354, 359  
 Peritonitis  
 due to appendix perforation, 47, 440  
 bacterial, 374  
 biliary, 484  
 due to bowel perforation, 31, 416-417  
 as cause of hypovolaemic shock, 19, 69, 394  
 and gastrointestinal stomas, 433  
 and inguinal hernia, 360  
 and intussusception, 405-410  
 and laparoscopy, 741  
 meconium, 377, 379  
 and necrotising enterocolitis, 416-417, 420  
 and omphalitis, 124-127, 353  
 and parasitic infestations, 142-143  
 and peptic ulcer disease, 373-375  
 related to shunt in neurodisabilities, 702-703  
 and transplantation, 774  
 and tuberculosis, 112-117  
 due to typhoid fever, 47, 104-105, 107-108  
 and vitelline duct anomalies, 390
- Peyer's patches, 104, 112, 398, 404  
 Pharynx, 59, 234, 236, 239, 277-278, 281, 330, 650, 652-653, 760  
 Phimosis, 554, 558, 560-561, 563  
 Phlebitis, 51, 352-353  
*Photobacterium damsela*, 130  
 Phrenic nerve injury to, 228, 229, 285, 295-296  
 Pilocytic astrocytoma, 639-645  
 Pineoblastoma, 640, 641  
 Plagiocephaly, 248-252, 728-729  
 Platelets, 35, 40-42, 47, 56, 105, 125, 225, 444, 449-501, 505, 586, 616, 657, 660  
 Pleural effusion, 121, 142, 299-302, 324, 629, 769  
 and bone tumours, 636  
 and chylothorax, 343  
 and lymphoma, 605-606  
 and pancreatitis, 495, 497  
 postoperative, 294  
 and pectus carinatum, 332  
 surgery, 301-303  
 tubercular, 112, 114, 118  
 with typhoid fever, 108
- Pleural fluid, 299-301, 343  
 Pleuropulmonary disease, 141, 288  
 Pneumatosis intestinalis, 417-419  
 Pneumocephalus, 191-193  
*Pneumococcus*, 38, 120, 186, 189, 302, 502  
 Pneumocystis, 770  
 Pneumonia, 112, 121, 216, 287, 289, 299, 653, 740, 742, 743, 770  
 aspiration, 10, 218, 376, 377, 380  
 bacterial, 15  
 as cause of death, 71  
 crepitations with, 104  
 with duplications, 398  
 with empyema, 299-302  
 with epiglottitis, 762  
 fungal, 740  
 with gastro-oesophageal reflux disease, 311, 312, 315  
 with lung abscess, 304, 306  
 necrotising, 304  
 with oesophageal atresia, 309  
 with pleural effusion, 299-302  
 with tracheobronchial foreign bodies, 329, 331  
 with tracheomalacia, 283, 284, 285
- Pneumoperitoneum, 104-105, 109, 114, 321, 374, 376, 380, 390, 407-408, 418-419, 421, 489, 738  
 Pneumothorax, 32, 72, 118, 165, 176, 275, 287, 294, 300, 315, 324, 332, 334-335, 584  
 iatrogenic, 701  
 open, 173, 176  
 risk of, 50-52  
 simple, 181  
 tension, 20, 69, 173, 175-176, 180-181, 292
- Poisoning  
 accidental, 157, 159, 162  
 carbon monoxide, 16, 69, 215  
 drug-related, 161, 222  
 due to plants, 161  
 due to physical abuse, 223  
 due to snake bites, 159, 161  
 suicidal, 159
- Poland's syndrome, 335, 725  
 Poliomyelitis, 56, 694-697, 716-718, 721  
 Polycystic disease, 24, 627  
 Polyposis, familial adenomatous, 461-463, 625, 771  
 Polyps, 461-463  
 anal fissure, 466  
 bladder, 146  
 colonic, 115, 404  
 gastrointestinal, 461, 463



- Polyps (*continued*)  
 intestinal, 404, 462  
 juvenile, 461-463  
 nasal, 759  
 rectal, 3, 390, 461  
 umbilical, 352-354  
 ureteral, 146  
 urethral, 582-583, 586
- Ponseti method, 695, 709-712, 721
- Portoenterostomy, 476-481, 766
- Portosystemic shunt, 126, 503-506
- Posterior sagittal anorectoplasty, 21, 200, 379, 457-460, 741
- Postoperative infection, 697, 713, 716, 740, 743  
 in acute scrotum, 592  
 in craniocerebral trauma, 193  
 craniospinal tumour, 641  
 congenital ureteropelvic junction stenosis, 516  
 in gastrointestinal stoma, 430  
 in infantile hypertrophic pyloric stenosis, 370  
 in intestinal malrotation, 395  
 orchiopexy, 571  
 sickle cell disease, 35, 37  
 typhoid fever, 107
- Postpolio syndrome, 716-718, 721
- Postsplenectomy infection, 186, 189, 230, 501-502
- Posttraumatic disorders, 193-196, 220, 363, 500, 584, 709, 712, 714, 719
- Posttraumatic events, 191, 194, 196
- Posttraumatic treatments, 202
- Potassium  
 infusion of, 20, 105, 197, 369, 426, 567, 768  
 levels, 24, 27-29, 104, 216-217, 567  
 losses of, 217, 368
- Prepuce, 529, 541-544, 547-548, 550-551, 554-558, 560-563
- Pressure ulcers, 40, 43-44, 196, 666, 733-734
- PRETEXT staging, 625
- Prevotella* sp., 730
- Primary survey  
 in burn victims, 216  
 in child abuse victims, 225  
 in trauma patient, 172-174, 177, 178  
 of urogenital tract, 200
- Processus vaginalis, 229, 358-359, 363, 569, 590
- Proctocolectomy, 445-446, 741
- Proliferation  
 bacterial, 99, 218  
 bile duct, 476, 483, 627  
 cellular, 495, 605, 607  
 epithelial, 510  
 evagination, 673, 679  
 haemangioma, 657-658, 725-727  
 lymphoid, 241, 440, 771, 774  
 microorganism, 40-45, 95, 98-99, 218, 440  
 of peripheral nerves in Hirschsprung's disease, 449  
 of respiratory bronchioles, 287  
 vascular, 643, 657
- Protein (*continued*)  
 C-reactive, 115, 121, 136, 440, 444  
 content, 115, 299, 302, 342-343, 401  
 contractile, 124  
 deficiency, 129, 718, 766  
 in diet, 217, 565-566  
 increased, 416, 426, 644, 732  
 globin, 34  
 and juvenile polyposis syndrome, 462  
 levels, 9, 33, 59, 71, 107, 109, 255-256  
 loss, 214, 217, 503, 597, 733  
 and lymphoedema, 664, 732  
 and pancreatitis, 485, 495  
 in parasitic infestations, 141
- Protein (*continued*)  
 plasma, 41, 59, 95, 487  
 requirements, 30  
 role in wound healing, 41-44, 95  
 serum, 31, 33, 108, 300, 623  
 in urine, 25
- Proteus* sp., 93, 124, 130, 565, 756
- Proteus syndrome, 601, 648, 664, 665
- Protozoal infection, 71, 96, 191
- Pseudoaneurysm, 202, 497
- Pseudocyst, 257, 377, 379, 495, 497, 500
- Pseudomonas aeruginosa*, 92, 218
- Pseudomonas* sp., 96, 120, 130, 218-219, 565, 756
- Pseudopolyps, 115, 443, 463
- Psychological disorders, 220, 394, 412, 414
- Psychological issues, 56, 76, 78, 80, 82-87, 177  
 with birth injuries, 229  
 with bladder problems, 536, 587  
 in burn victims, 220  
 in child abuse victims, 222  
 and circumcision, 557-558  
 with cleft lips/palates, 728  
 of conjoined twins, 752  
 with haemangiomas, 657  
 with Hirschsprung's surgery, 452-453  
 with intestinal stomas, 429, 433  
 with neurofibromatosis, 732  
 with sexual identity, 545, 576, 578  
 with unilateral limb enlargement, 664
- Public health efforts, 3-4, 6, 72, 323, 777, 780  
 on clubfoot care, 711-712, 721  
 lack of facilities, 145  
 on orthopaedic surgery, 709  
 on rickets, 720  
 on typhoid fever, 108  
 on umbilical cord care, 353
- Pull-through procedures, 84, 379, 429, 433, 446, 449, 451-453, 461, 675, 740-741
- Pulmonary abnormalities, 15, 297, 349, 741
- Pulmonary artery, 18, 283-285, 288
- Pulmonary aspiration, 32, 56
- Pulmonary blood pressure, 15
- Pulmonary capillaries, 68
- Pulmonary circulation, 9, 14-15, 18, 21, 68, 291
- Pulmonary compression, 334, 343
- Pulmonary consolidation, 104, 497
- Pulmonary contusion, 72, 180-182
- Pulmonary disease, 112, 242, 511
- Pulmonary dysfunction, 220, 752
- Pulmonary embolism, 69
- Pulmonary embryology, 15
- Pulmonary fibrosis, 40, 42
- Pulmonary function, 9, 14-16, 59, 334
- Pulmonary hyperplasia, 288
- Pulmonary hypertension, 9-10, 15, 291, 295, 297, 503, 747, 761, 769
- Pulmonary hypoplasia, 15, 295, 335, 343, 584, 603, 749
- Pulmonary infection, 111, 182, 220, 289, 299-300, 304, 402, 629
- Pulmonary injuries in burn victim, 215
- Pulmonary malignancy, 741
- Pulmonary metastases, 266, 598, 615, 625, 634, 636, 725
- Pulmonary mortality, 16
- Pulmonary oedema, 14, 20-21, 27, 69-70, 215
- Pulmonary outflow obstruction, 21
- Pulmonary parasitic infestations, 144-145, 148
- Pulmonary parenchymal infection, 112, 302
- Pulmonary perfusion, 21
- Pulmonary physical therapy, 15
- Pulmonary physiology, 14-15
- Pulmonary resection, 116, 741
- Pulmonary sequestration, 287-288, 343
- Pulmonary sepsis, 319
- Pulmonary thoracic teratoma, 603
- Pulmonary tuberculosis, 111-113, 116-118, 241
- Pulmonary vascular resistance, 9-10, 15
- Pulmonary vasculature, 15, 287, 291, 295
- Pulmonary vasoconstriction (hypoxic), 15
- Pulmonary vasodilatation, 293-294
- Pyloric stenosis, 3, 28, 327, 368-371, 694, 695, 740, 742
- Pyopericardium, 121
- Pyomyositis, 93, 120-123
- Pyriform aperture stenosis, 327, 758
- ## R
- Radial nerve palsy, 228
- Radiography  
 for abdominal trauma, 185  
 for achalasia, 320  
 for annular pancreas, 492-493  
 for appendicitis, 440  
 for birth injuries, 229  
 for bladder injuries, 204  
 for bladder outlet obstruction, 585-586  
 for child abuse injuries, 224-225  
 for colonic atresia, 437  
 for congenital cystic lung lesions, 287-290  
 for conjoined twins, 751, 753  
 contrast-enhanced. *See* Contrast-enhanced radiography.  
 for cystic fibrosis, 711  
 for developmental dysplasia of the hip, 249  
 for diaphragmatic hernia, 293, 295  
 for elbow fracture, 715  
 for extramedullary tumours, 644  
 for foreign body detection, 329-331  
 for haemoglobinopathies, 35-36  
 for Hirschsprung's disease, 450  
 for hydrometrocolpos, 672  
 for inguinal hernia, 360  
 for intestinal malrotation, 394  
 interventional, 202  
 for intussusception, 407, 410  
 for kidney tumours, 598  
 for lymphadenopathy, 242  
 for lymphangiomas, 650  
 for lymphoma, 605  
 for meconium ileus, 402  
 for mediastinal mass, 611-612  
 for musculoskeletal trauma, 209  
 for necrotising enterocolitis, 417-419, 421  
 for necrotising fasciitis, 131  
 for neonatal intestinal obstruction, 381-382, 384  
 for nutritional rickets, 719  
 for omphalitis, 125  
 for osteomyelitis, 136, 139  
 for pancreatitis, 495  
 for parasitic infestations, 142-143  
 for pleural effusion, 300  
 for primary bone tumours, 634, 636  
 for pyomyositis, 121-122  
 in reconstructive surgery, 726, 729  
 for salivary gland disease, 255  
 of shunts, 703  
 for spinal cord injury, 195  
 for telemedicine, 778  
 for teratomas, 602-603  
 for thoracic trauma, 180-182  
 for thyroid gland, 266  
 for torticollis, 249  
 training for, 784  
 for tuberculosis, 115, 466  
 for typhoid intestinal perforation, 104

- Radiography (*continued*)  
 for unilateral limb enlargement, 666  
 for urogenital trauma, 201  
 for urolithiasis, 566  
*See also* Angiography, Cystogram.
- Ranula, 254, 257
- Rape, 152, 159, 222
- Ravitch procedure, 332, 334
- Reconstruction  
 due to benign lesions, 633-634  
 biliary, 485, 768, 772-773  
 bladder, 530, 533, 536, 587, 705  
 with conjoined twins, 752-754  
 for disorders of sex development, 577-578, 587  
 ethical issues, 536  
 facial, 259, 726, 734  
 flaps, 132, 725, 731, 733  
 gastrointestinal tract, 772-773  
 J-pouch, 741  
 due to lymphoedema, 732  
 due to neurofibromatosis, 731-732  
 oesophageal, 325  
 ossicular, 757  
 plastic, 3, 515, 545, 704, 724-734  
 preputial, 543, 548, 554-556  
 due to pressure ulcers, 733-734  
 sagittal, 195  
 sternal, 335-336  
 tissue expansion, 725, 752  
 tracheal, 278  
 umbilicus, 355  
 ureteric, 203  
 urethral, 535, 547, 550-552, 578  
 uterine, 680  
 vaginal, 577-578, 587, 675  
 vascular, 209, 725-726
- Reconstructive surgery, 72, 139, 259, 535, 536, 635-637, 724-734.  
 for burns, 216  
 for clubfoot, 710  
 for necrotising fasciitis, 94, 132  
 skin grafts, 724. *See also* Skin graft.
- Rectal prolapse, 431, 465, 467-468, 566
- Rectovaginal fistula, 3, 152, 429, 455, 460, 465
- Rectum, 177, 184, 187-188, 25, 376-379, 405  
 and anorectal conditions, 455-460, 467-468  
 and bladder outlet obstruction, 584-585  
 and cloaca, 673, 675  
 duplications, 377, 399  
 embryology, 581  
 and Hirschsprung's disease, 449-452  
 and necrotising enterocolitis, 417-418, 421  
 and polyps, 461-462  
 prolapse, 467-468, 529  
 and ulcerative colitis, 443-444  
 and worms, 412, 414  
*See also* Rectal entries.
- Reflux  
 biliary, 484, 485  
 gastro-oesophageal, 249-250, 275, 283-286, 294, 297, 308, 310-317, 320, 368, 418, 754  
 laryngopharyngeal, 760  
 pancreaticobiliary, 483, 484  
 urine, 586, 590  
 vesicoureteric. *See* Vesicoureteric reflux.
- Relaparotomy, 108, 441
- Renal anomalies, 748-749
- Renal cell carcinoma, 511, 597, 599
- Renal function, 18, 23-25, 58-59, 539, 584
- Renal osteodystrophy, 267, 584
- Renal trauma, penetrating, 203
- Respiration  
 abscess effect, 95-96  
 with birth injuries, 229
- Respiration (*continued*)  
 with burn injuries, 215  
 complications of spinal cord injury, 196  
 intubation, 70  
 management, 180  
 monitoring, 350  
 mechanical ventilation, 69, 181,  
 and pain management, 59, 64  
*See also* Respiratory entries.
- Respiratory acidosis, 738
- Respiratory adaptation, neonatal, 10, 58
- Respiratory complications  
 of neurologically impaired child, 315  
 of spinal cord injury, 196
- Respiratory compromise, 70, 173, 294, 336, 349-350, 495
- Respiratory depression, 59, 64
- Respiratory distress, 28, 72, 173-174  
 with bladder outlet obstruction, 584  
 with chest wall deformities, 335-337  
 with chylothorax, 343  
 with congenital cystic lung lesions, 287, 289  
 with congenital diaphragmatic hernia, 291-296  
 with gastro-oesophageal reflux disease, 311  
 with hydrometrocolpos, 672, 674  
 with hyperparathyroidism, 267  
 in intussusception, 408  
 with lymphangiomas, 649  
 with mediastinal lesions, 339  
 with oesophageal atresia, 306  
 with omphalitis, 125  
 with otorhinolaryngology, 759, 761  
 with teratomas, 603  
 in thoracic duplications, 398  
 with tracheomalacia, 283-284  
 in upper airway obstruction, 278
- Respiratory distress syndrome, 14, 382, 420
- Respiratory epithelium, 236, 238, 289
- Respiratory exercises, 180
- Respiratory failure, 10, 20, 67-70, 73, 112, 173, 181, 293, 311,  
 in conjoined twins, 754  
 with duodenal obstruction, 381  
 with intestinal obstruction, 376
- Respiratory function  
 assessment of, 165-167, 173, 176, 332-334, 773  
 in children versus adults, 55, 57, 59-60  
 and typhoid fever, 104-105  
 and tuberculosis, 112
- Respiratory insufficiency, 24, 68, 180, 195-196, 752
- Respiratory monitoring, 20, 58-59, 64, 68, 72, 173, 176-177, 196, 280
- Respiratory obstruction, 58, 259, 263, 650-653
- Respiratory papillomatosis, 762
- Respiratory paralysis, 717
- Respiratory physiology, 14-16, 68
- Respiratory problems  
 anaesthesia risks, 56  
 and shock, 20  
 suggested treatment, 10, 12, 15-16
- Respiratory rate  
 inadequate, 68  
 normal, 57, 68, 173  
 and pain, 62  
 rising, 277, 280. *See also* Tachypnoea.
- Respiratory reserve, 292, 295
- Respiratory scoring systems, 165-167
- Respiratory support, 70, 73, 196, 229, 284
- Respiratory symptoms  
 with gastro-oesophageal reflux disease, 312  
 with achalasia, 319, 321
- Respiratory syncytial virus, 283
- Respiratory tract infection, 92, 279-280, 283-285, 329, 503  
 and acute suppurative lymphadenitis, 240  
 and haematogenous osteomyelitis, 135, 139  
 and lymphatic malformations, 651  
 nosocomial, 94
- Resuscitation, 11-12, 47-48, 60, 93-94, 105, 122, 132-133, 143, 169, 172-178, 187, 209, 212, 713, 733  
 ABCDEs of, 172, 178, 200, 215, 225  
 abdominal trauma, 184-185  
 in burns, 214-221  
 cardiopulmonary, 77  
 in child abuse injuries, 225  
 and congenital diaphragmatic hernia, 293  
 of conjoined twins, 751  
 fluid. *See* Fluid resuscitation.  
 and head injury, 191, 192, 198  
 and intestinal obstruction, 37, 378-380, 384, 413, 415  
 and intussusception, 406, 409  
 and liver disease, 481  
 and necrotising enterocolitis, 418-419  
 and pancreatitis, 495-496  
 and peptic ulcer, 373-374  
 and spinal cord injury, 195, 198  
 and thoracic trauma, 180, 182  
 and tracheomalacia, 283-284  
 and trauma, 172-178, 180, 182, 184-185, 191-192, 195, 198, 713  
 volume, 20, 26, 173, 192, 216, 293
- Retinoblastoma, 609, 614, 634-636, 640
- Retropharyngeal abscess, 250, 279-281, 760, 762
- Revised Trauma Score (RTS), 165-167, 169-170
- Rhabdoic tumour, 597, 599
- Rhabdomyosarcoma, 122, 243, 254, 260, 288, 352, 583, 587, 613-618, 621, 624, 626, 732
- Rhinitis, 757-758
- Rhinosinusitis, 758-759
- Rhizopus arrhizus*, 130
- Rib fractures, 180, 224
- Rickets, 225, 479, 619, 696, 709, 718-721, 728
- Road safety, 160, 161
- Rosai-Dorfman disease, 241, 242
- Rubella, 243, 245, 254, 477, 494, 667, 694, 757
- S**
- Sacrococcygeal teratoma, 582-583, 748
- Salivary glands, 154-162, 54-261, 495
- Salmonella paratyphi*, 103
- Salmonella typhi*, 38, 103, 105, 109
- Salmonella* sp., 36, 105, 120, 135, 139, 500
- Satellite, information transfer, 779
- Scalp, 92, 190-193, 198, 234, 240, 615, 730
- Scars, 42, 250, 379, 657  
 abdominal, 433, 452  
 in burns, 42, 214, 220  
 chest wall, 335-336  
 formation, 40, 42, 46, 95, 130, 132, 215  
 and haemangiomas, 658-659  
 hypertrophic, 42, 220  
 management, 220  
 and plastic surgery, 726, 728, 730-731, 733  
 in secondary closure, 350  
 tissue, 40, 130, 273, 703  
 in umbilicus formation 352  
 unsightly, 49, 100, 220, 237, 535
- Scintigraphy  
 for bladder outlet obstruction, 585-586  
 for bone tumours, 624-636  
 hepatic, 623  
 radioisotope, 751  
 radionucleoid, 484  
 renal, 202, 514-515

- Scintigraphy (*continued*)  
 for rhabdomyosarcoma, 616  
 for salivary gland disease, 257  
 technetium-99, 398, 514  
 for thyroid gland, 262  
 thyroid iodine, 238, 263  
 for ureteropelvic junction stenosis, 514-516  
 for vesicoureteric reflux, 524  
 for vitelline duct malformation, 390
- Schistosoma* sp., 145, 583, 586
- Schistosomiasis, 141, 145-146, 200, 503, 506, 582-584, 587, 590
- Sclerotherapy, 27, 504-506, 627, 648, 651-654, 662
- Scoliosis, 214, 300, 440, 623, 644, 754  
 in conjoined twins, 753  
 with Ewing's sarcoma, 636  
 with neurofibromatosis type 1, 732  
 with pectus carinatum, 332  
 with postpolio syndrome, 717  
 risks for, 694, 695  
 with spina bifida, 704-705  
 with sternomastoid tumour, 251  
 thoracic, 302  
 with torticollis, 249
- Scrotum, 126, 147, 205-206, 358-362, 364, 530, 541, 543-544, 546, 569-570, 576, 602  
 acute, 519, 590-593  
 hemiscrotum, 363-364, 592
- Secondary survey  
 in abdominal trauma, 176-177  
 in burn victims, 172-178, 215-217, 225
- Seizures, 56, 71, 194, 640, 645
- Seldinger technique, 48, 51-53, 184
- Sensorineural hearing loss, 757
- Sepsis, 20-22, 25-26, 31, 36, 70, 93, 220, 311, 394, 431, 441, 452, 705  
 bacterial, 472-473  
 in bladder injuries, 204  
 in burn wounds, 216-220  
 catheter-related, 49, 52-53, 96, 379, 771  
 as cause of hypoglycaemia, 28  
 as cause of infective gangrene, 93  
 as cause of renal failure, 24  
 as cause of shock, 22, 69  
 with cholecystitis, 489  
 with circumcision, 557, 561  
 as complication of parenteral feeding, 32, 218  
 with conjoined twins, 752, 754  
 fungal, 11, 219  
 with haematogenous osteomyelitis, 135-137, 140  
 with hyponatraemia, 197  
 inflammatory response syndrome, 68  
 with inguinal hernia, 360  
 in kidney trauma, 202  
 with necrotising enterocolitis, 416-418  
 with necrotising fasciitis, 94  
 in neonates, 9, 353, 376-377, 416, 584, 588, 705  
 with omphalitis, 124-125, 127  
 with peptic ulcer disease, 372  
 postsplenectomy, 500-502  
 with pressure ulcers, 733  
 pulmonary, 319  
 pyomyositis, 121  
 respiratory, 283  
 with short bowel syndrome, 427  
 systemic, 135-137, 140, 353, 767  
 in thyroiditis, 264  
 after traditional bonesetting, 211  
 in transplantation, 767, 769, 771-773  
 in ureteric injuries, 203  
 viral, 11
- Septicaemia, 11, 32, 100, 120-121, 131, 144-145, 304, 360, 416, 427, 584
- Septic arthritis, 36, 50, 122, 131, 139-140, 144, 716
- Septic embolisation, 241, 304
- Septic shock, 19-21, 73, 121, 125, 418, 441
- Sequestration, 489  
 bronchopulmonary, 287-289, 304, 747  
 fluid, 405, 496  
 hepatic, 35-36, 489  
 pulmonary, 287-289, 343  
 splenic, 35-36, 500
- Serous fluid, 299-300, 653
- Serratia*, 120
- Sex-cord stromal tumours, 685-687, 689
- Sex development, disorders of. *See* Disorders of sex development.
- Sexual abuse, 152, 159, 174, 200, 206, 222, 225-226, 466-469, 682-683
- Sexual activity, 561-562, 675, 680, 686
- Sexually transmitted disease, 78, 222, 226, 468, 590-591. *See also* AIDS, HIV.
- Shaken baby syndrome, 224
- Shock, 18-22, 69  
 due to blood loss, 72  
 and burn victim, 19, 69, 216  
 cardiogenic, 21, 69  
 and hypotension, 104, 173  
 and hypothermia, 20, 173  
 hypovolaemic, 19-22, 35, 69-70, 72-73, 173, 192, 216, 378, 491  
 with infection, 72  
 neurogenic, 21  
 obstructive, 69  
 septic, 19-21, 73, 121, 125, 418, 441  
 toxic, 92, 121, 130, 133  
 and typhoid fever, 104
- Short bowel, 387-388
- Short bowel syndrome, 50, 118, 387, 395-396, 399, 419, 424-428, 771
- Shunts, 503-507  
 avoidance of, 701-702  
 arteriovascular, 661  
 arteriovenous, 77, 289, 660, 726  
 cavernoglanular, 37  
 cerebrospinal fluid, 193, 701, 703  
 Chhabra, 696  
 failure, 702, 705, 706  
 fistula, 661  
 foetal, 9-10, 15, 287, 291, 398, 538, 661, 747, 749  
 for hydrocephalus, 641, 695-696, 704, 706, 728  
 infection of, 702-706  
 intrapulmonary, 10  
 mortality rates, 705  
 pleural, 701  
 pleuroamniotic, 287  
 pleuroperitoneal, 343, 344  
 portosystemic, 126, 503-506  
 postoperative complications, 702-703  
 splenorenal, 505-506  
 ventriculoatrial, 701  
 ventriculoperitoneal, 355, 696, 701, 703, 706
- Shuntalgia syndrome, 703
- Sialorrhea, 254, 257
- Sickle cell disease, 34-38  
 anaemia, 35, 37, 56, 488, 712, 714, 728, 759-760, 763  
 and choledocholithiasis, 473  
 and cholelithiasis 36, 487-490  
 complications, 34-38, 490  
 demographics, 34, 487  
 and haematogenous osteomyelitis, 135-136, 138-139
- Sickle cell disease (*continued*)  
 management of, 38, 501, 760  
 and necrotising fasciitis, 132  
 Ogilvie's syndrome, 412  
 orthopaedic manifestations, 36  
 and short bowel syndrome, 424  
 and splenic disease, 499-502  
 and splenectomy, 35, 500  
 and tonsillectomy, 760, 763  
 and typhoid fever, 107
- Sjogren's syndrome, 254, 256-257
- Skeletal injury, 120, 167-169, 211, 223-224, 267
- Skeletal maturation, 265-266, 729, 731
- Skin graft, 37, 41, 49, 93, 216, 724, 730, 733  
 for arteriovenous malformation, 662  
 for chordee correction, 532  
 for chronic wounds, 43-44  
 in conjoined twins, 752, 754  
 with necrosis, 49, 126, 132  
 for scalp loss, 192  
 split-thickness, 37, 206, 662, 675, 680, 724  
 in vaginal agenesis, 680
- Skin necrosis, 37, 49-50, 125, 242, 556, 653, 752
- Skin ulcer, 37, 332
- Skull fracture, 173, 176, 190-194, 223, 228
- Small bowel, 390, 393-394, 399, 402  
 atresia, 388, 437-438, 740, 748  
 bowel loops, 114, 390, 418  
 in conjoined twins, 753  
 contrast studies, 114, 386, 413, 444  
 and Crohn's disease, 445-446  
 disease, 445-446  
 duplication, 398-399  
 embryology, 389, 393  
 enterostomy, 30, 402  
 follow-through, 414, 444  
 and Hirschsprung's disease, 449, 453  
 with hyperaemia, 417  
 and ileosigmoid knotting, 414  
 intussusception, 407  
 ischaemia, 395  
 with jejunal atresia, 386  
 length, 379, 424, 426  
 lymphatic drainage, 115  
 in malrotation, 394-396  
 motility, 424  
 necrotic, 417  
 in nonrotation, 393  
 obstruction, 390, 412-414, 446, 500-501  
 parasites in, 414  
 and prenatal diagnoses, 748  
 pyogenic granuloma, 726  
 resection, 379  
 stomas, 429  
 transplantation, 380, 771-774  
 tuberculosis, 112, 114-115
- Socioeconomic effects on paediatric care, 5, 31, 111-112, 132, 136, 143, 149, 157-158, 190, 223, 355, 699, 705, 718, 762
- SOCRATES mnemonic, for pain assessment, 62
- Sodium levels  
 in the neonate, 23-26, 28-29, 55, 368  
 in short bowel syndrome, 424, 426
- Soft tissue infection, 92, 98, 784  
 with aplasia, 255  
 with burns, 177  
 with cellulitis, 93  
 with haematogenous osteomyelitis, 136, 139  
 with lymphoedema, 665  
 in musculoskeletal trauma, 209, 211-212  
 with retropharyngeal abscess, 281  
 at surgical site, 98, 662  
*See also* Necrotising fasciitis.

- Soft tissue trauma, 177, 208-209, 211, 223, 662, 712-713, 730, 779
- Soft tissue tumours, 259, 582, 603, 612, 613-621, 624, 634-636, 640, 657, 665-667, 686, 770
- Sonogram, 576
- Spasticity, 197, 265, 659
- Spherocytosis, 477, 488, 490, 499-500
- Spina bifida, 3, 429-430, 565, 601, 694-698, 699-706, 733, 754, 761
- Spinal cord  
and conjoined twins, 751-752  
mass lesion, 71, 197  
and meningoceles, 700  
and non-Hodgkin's lymphoma, 606  
and polio virus, 716  
role in voiding, 581, 584  
and spina bifida, 700-701  
syndromes, 195  
tumours, 639-645
- Spinal cord injury, 18, 194-198  
assessment, 165, 176-177, 456, 700-701  
as birth injury, 229  
cervical, 21, 52, 67, 68, 72, 172, 176, 191, 194-195, 250, 729  
complications, 43, 196-197  
management, 195-196, 430  
pathophysiology, 61, 194  
and permanent stomas, 430  
in physical abuse, 223  
and shock, 69
- Spleen, 499-502  
abscess, 103, 500  
accessory, 499, 501  
acute, 35  
cysts, 500, 501, 740  
embolisation, 479, 505  
and glandular fever, 281  
and hydatid disease, 147  
infarcts, 500  
injury to, 165, 169, 180, 184, 185-187, 229-230, 294, 315, 501  
and leukaemia, 501  
and liver transplantation, 766  
and lymphoma, 501  
and non-Hodgkin's lymphoma, 606  
perforations, 106  
and portal venous pressure, 503  
rupture, 185  
sequestration, 35-36, 500  
and sickle cell disease, 35-36, 38, 500  
and tuberculosis, 112  
tumours, 67  
and typhoid fever, 106  
vein thrombosis, 497  
wandering, 499
- Splenectomy, 35-37, 186, 189, 230, 315, 479, 488, 490, 499-502, 505, 740
- Splenogonadal fusion, 499-500
- Splenomegaly, 3, 37, 146, 476, 499-505, 605
- Splenopexy, 499
- Splenorenal shunts, 505-506
- Splenorrhaphy, 186, 501
- Splenosis, 501
- Squamous cell carcinoma, 220, 238, 327
- Staphylococcus aureus*  
and abscesses, 95, 96, 281  
and bone infection, 36  
and carbuncle, 92-93  
and empyema thoracis, 299, 302  
and folliculitis, 92  
and furuncles, 92  
and impetigo, 92  
and lymphadenitis, 241  
and omphalitis, 124-125
- Staphylococcus aureus* (continued)  
and open fracture, 712  
and otitis media, 756  
and pneumonia, 299  
and pulmonary abscess, 304  
and pyomyositis, 93, 120, 122  
and shunt infections, 702
- Staphylococcus epidermidis*, 702
- Staphylococcus pneumoniae*, 299, 302
- Staphylococcus* sp.  
and cellulitis, 93  
and liver abscess, 96  
and lymphangiomas, 651  
and necrotising fasciitis, 94  
and osteomyelitis, 135  
and otitis media, 756  
and phimosis, 560, 561  
and rhinosinusitis, 758  
and septic arthritis, 139  
and splenic abscess, 00  
and surgical site infection, 99  
and urinary tract infection, 565
- Stenosis, 277, 278, 324-327, 376-377, 485, 535, 538  
airway, 274  
ampullary, 473  
anal, 3, 582  
antral, 324, 327  
aqueductal, 644, 699, 701  
auditory canal, 757  
bile duct, 477, 483  
bowel, 146  
bronchial, 304  
with colonic atresia, 437  
distal, 551-552  
duodenal, 376, 381-384  
with Hirschsprung's disease, 452  
intestinal, 385-388  
meatal, 546, 551, 557, 560-563, 565  
pulmonic, 17, 28  
pyloric, 3, 368-371, 694-695, 740, 742  
pyriform aperture, 758  
stomal, 431-433  
subglottic, 272, 278, 281, 761-763  
in transplants, 768-769, 774  
ureteral, 146, 540  
ureteropelvic junction, 13-17, 540  
urethral, 205, 51  
vaginal, 205, 675
- Stents  
airway, 285  
endobronchial, 284  
endoluminal, 285  
for pancreatitis, 496  
intestinal, 413  
intranasal, 757-758  
oesophageal, 325  
of sternum, 336  
transjugular intrahepatic, 506  
ureteric, 516, 521, 526, 532, 534-535, 546, 583
- Sternal bars, 334-336
- Sternal cleft, 336
- Sternal defect, 292, 333, 348
- Sternal depression, 333-334
- Sternal fractures, 176
- Sternal protrusion, 332
- Sternal reconstruction, 336
- Sternal torsion, 333-334
- Sternal wounds, 44
- Sternomastoid tumour, 234, 248-253
- Stigmatisation  
of children with disabilities, 4, 83-85  
of disorders of sex development, 577-578  
of HIV/AIDS, 79, 153
- Stings, 157, 159
- Stoma, 11, 13, 28, 313  
as biliary conduit, 478  
bowel, 426, 446, 535  
colonic atresia, 437  
colostomy, 451, 457  
complications, 315, 430-433  
double-barrel, 116  
gastrointestinal, 429-434  
ileum, 402  
implantation, 772-773  
intestinal, 356, 385, 387-388  
necrotising enterocolitis, 419-420  
at umbilicus, 356  
urinary, 356, 535-536
- Strategies  
for conjoined twins, 750-752  
coping, 83, 85  
to improve paediatric surgery in Africa, 3, 5, 161, 356, 419, 777-778  
preventive, 101, 160-162, 198, 252, 420, 622, 711, 774  
for transplantations, 768, 771-772, 774  
WHO Stop TB Strategy, 119  
for wound healing, 42-43
- Streptococcus haemolyticus*, 281
- Streptococcus milleri*, 302, 758
- Streptococcus pneumoniae*  
bacterial tracheitis, 281  
empyema, 299, 302  
rhinosinusitis, 758  
splenectomy, 501, 502
- Streptococcus pyogenes*  
impetigo, 92  
lymphadenitis, 241  
lymphangiomas, 652  
necrotising fasciitis, 130
- Streptococcus* sp.  
cellulitis, 93  
lymphangiomas, 651  
necrotising fasciitis, 93, 94, 129-131  
omphalitis, 124  
otitis media, 756  
pyomyositis, 93, 120  
rhinosinusitis, 758  
septic arthritis, 139  
splenic abscess, 500  
tonsillitis, 760, 763
- Stress  
foetal, 14  
neonatal, 11, 55, 79  
patient, 56, 62, 164, 514  
parental, 56, 79, 83, 223  
relation to cost of surgery, 83-84, 433  
relation to paediatric surgery, 56, 79, 82-87, 433, 774  
response, 11, 26, 34, 62, 372
- Stridor, 275, 277, 763  
in acute epiglottitis, 762  
in aerodigestive foreign bodies, 329  
due to bronchogenic cysts, 238  
in Chiari II, 704  
in congenital laryngeal lesions, 760-761  
in corrosive ingestion, 323-324, 328  
as indication for diagnostic bronchoscopy, 273  
as indication for laryngoscopy, 272  
in laryngotracheobronchitis, 762  
in mediastinal lesions, 339  
in oesophageal atresia, 308  
in paediatric upper airway obstruction, 273, 277-281  
in recurrent respiratory papillomatosis, 762  
as sign of respiratory failure, 173  
in tracheomalacia, 283-286

- Subglottic stenosis, 272, 278, 281, 761-763  
 Subhepatic appendix, 393  
 Sublingual gland, 254, 255, 257  
 Supratentorial tumour, 639, 643-644  
 Surgical site infection (SSI), 98-101, 107, 409  
 Survey  
   primary, 172-178, 200, 216, 225  
   secondary, 172-178, 215-217, 225  
 Synchronous telemedicine, 778  
 Synovial sarcoma, 614, 618, 621
- T**
- Tachycardia, 19-22, 26, 58, 68-70, 99, 104, 125, 131, 173-174, 182, 194, 495, 738  
 Tachypnoea, 9, 19, 70, 94, 99, 125, 173, 194, 215, 283-284, 304  
 Talipes equinovarus, 625, 695, 704, 710. *See also* Clubfoot.  
 Tamponade  
   cardiac, 69, 173, 176  
   due to catheter malposition, 53  
   pericardial, 176, 182  
 Telemedicine, 6, 637-638, 734, 777-781, 785  
 Temperature regulation, 8-9, 55-56  
 Teratomas, 237, 243, 273, 601-604, 639, 650-651  
   abdominal, 603  
   cervical, 603  
   craniofacial, 603  
   cystic, 649-651, 654, 685  
   gastric, 603  
   gonadal, 237  
   intracranial, 603  
   intrapelvic, 602  
   mediastinal, 338, 342, 601, 603  
   oral, 273  
   ovarian, 602, 686-687  
   renal, 599  
   retroperitoneal, 603  
   sacrococcygeal, 3, 237, 582-583, 602-604, 704, 748  
   testicular, 364, 590, 601-602  
   thoracic, 603  
   umbilical, 352  
   vascular, 619-620  
 Testis, 206, 358-360, 362-363, 529-530, 544, 546, 574, 591-593, 753  
   carcinoma, 569, 578  
   disorders, 361, 573-574, 576, 578  
   inguinal hernia, 358-359, 541, 574  
   teratoma, 601-602  
   torsion, 590-593  
   tumours, 590  
   undescended, 3, 359, 362, 544, 569-571  
 Tetanus, 144, 145, 187, 353  
 Tetanus prophylaxis, 132, 187, 192, 209, 211, 215, 217, 221, 712, 713, 729  
 Thalassaemia, 34-38, 500-502, 728  
 Thiersch technique, 431, 468, 548-549  
 Third space, fluid accumulation in, 29, 70, 216  
 Thoracic injury, 72, 180-183  
 Thoracolumbar injury, 196  
 Thoracopagus twins, 750-753  
 Thoracoscopy, 285, 288-289, 294, 296, 299-302, 334-335, 337, 341, 343, 398-399, 738-743  
 Thoracostomy, tube, 181, 301-302  
 Thoracotomy, 112, 180-182, 285, 288-289, 301-302, 308, 340, 343, 398-399, 603, 741-742  
 Thromboembolism, 196  
 Thrombophlebitis, 32, 49, 219, 304  
 Thrombosis, 32, 43, 49, 52-53, 92, 130, 323, 626  
   aortic, 49  
   arterial, 209  
   with burns, 215  
   due to catheter, 51, 53  
 Thrombosis (*continued*)  
   cerebral vascular, 641  
   femoral vein, 50, 52  
   hepatic artery, 767, 769, 774  
   hepatic vein, 504, 506  
   jugular vein, 241  
   mesenteric vein, 501  
   portal vein, 47, 124-127, 353, 501, 503, 769  
   due to shunt, 505-506  
   splenic vein, 497, 501, 505  
   subclavian vein, 342  
   vena cava, 342, 769  
   venous, 47, 50, 52, 62, 124-127, 241, 342, 353, 497, 501, 503-506, 641, 769  
 Thyroglossal cysts, 3, 237-238, 239  
 Thyroglossal fistula, 238, 239  
 Thyroid gland, 234, 236-239, 262-268  
 Thyroiditis, 250, 262-266, 268, 659  
 Thyrotropin, 262  
 Tissue expansion, 725, 752  
 Tonsillectomy, 250, 727, 760, 763  
 Tonsillitis, 235-236, 277-279, 281, 760, 763  
 Torticollis, 248-253, 311, 729  
 Total parenteral nutrition, 10, 13  
   and cholelithiasis, 487  
   and cholestasis, 477  
   and chylothorax, 343-344  
   and hepatocellular carcinoma, 626  
   and intestinal obstruction, 379  
   and inflammatory bowel syndrome, 445  
   and short bowel syndrome, 424-425, 427  
   and transplantation, 767, 771  
   and typhoid fever, 109  
 Toxic shock syndrome, 92, 121, 130, 133  
 Trace mineral requirements, 30  
 Tracheitis, 279, 281  
 Tracheobronchial injury, 180  
 Tracheomalacia, 273, 278, 283-286, 308  
 Tracheo-oesophageal fistula, 741, 748  
 Tracheo-oesophageal injury, 180  
 Traction  
   during birth, 228-229  
   for femur fracture, 209  
   for fractures, 209, 210  
   gallows, 531, 532  
   skull, 196  
   spinal cord injury, 196  
 Training  
   anaesthesia specialty, 60, 64  
   of birth attendees, 230-231  
   for circumcision, 557  
   in minimal access surgery, 741-743  
   of nonsurgical personnel, 6, 11, 356  
   in orthopaedics, 709, 719  
   in paediatric surgery, 4-5, 182, 490, 577, 749, 783  
   of parents, 284  
   in plastic and reconstructive surgery, 724  
   on Ponseti technique, 711  
   recommendations for, 5-6, 780, 783-785  
   shortage of, 5, 64, 593, 695, 781  
 Transplantation, 766-775  
   bone marrow, 47, 243, 611  
   bowel, 427-428  
   and immunosuppression, 96, 639  
   intestinal, 426, 427, 771-775  
   kidney, 267, 511, 618-619, 705  
   liver, 427, 473-474, 476, 479-480, 485, 504-507, 619, 625-627, 629-630, 766-771, 775  
   organ, 82, 99  
   skin, 42  
   small bowel, 380, 771-772  
   urethral valve, 540  
   *See also* Autotransplantation.
- Transportation  
   injuries, 157-158, 160, 200  
   limitations to, 5, 169, 200, 212  
   neonatal, 11-13, 784  
 Trauma, 157-162  
   abdominal, 184-189, 200  
   bladder, 203-204  
   blunt, 184-187, 190, 200, 202-204  
   as cause of morbidity and mortality, 72, 157  
   as cause of paediatric health care admissions, 4, 157  
   craniocerebral, 190-194  
   initial assessment of, 172-178  
   kidney, 202-203  
   registry, 169-170  
   resuscitation of, 172-178  
   thoracic, 72, 180-183  
   treatment of, 72  
   urogenital, 200-206  
   *See also* Injury.  
 Trauma and ISS (TRISS), 168, 170  
 Trauma Score (TS), 165, 166-167  
 Triage, 157, 164-167, 169, 172, 246-247, 416  
*Trichuris trichuria*, 467  
 Tuberculosis, 111-119  
   extrapulmonary, 116, 117, 239, 241  
   HIV-related, 111, 117, 119, 152-153  
   lymph node enlargement, 234-235, 239-241  
   and oncology patients, 243  
   peritoneal, 112-113, 114  
   pulmonary, 111, 116, 118  
   testing, 113-114, 339  
 Tumours. *See* Teratomas; *specific tumours*  
 Turner syndrome, 264, 342, 343, 573, 649  
 Twinning, partial, 397, 601  
 Twins  
   conjoined, 750-754  
   and Crohn's disease, 443  
   and infantile hypertrophic pyloric stenosis, 368  
   and obstructive jaundice, 472  
   parasitic, 750-754  
   and posterior urethral valves, 538  
   and undescended testis, 569  
 Typhoid  
   intestinal perforation, 103, 105, 109, 412  
   and peritonitis, 47  
 Typhoid fever, 103-109
- U**
- Uganda Sustainable Clubfoot Care Project, 710-712, 719  
 Ulcers  
   and Bacille Calmette-Guérin virus, 242  
   bleeding, 373, 389, 431  
   with Crohn's disease, 444-445, 446  
   Curling's, 220, 372  
   Cushing's, 372  
   decubitis, 43, 704  
   diabetic, 42  
   duodenal, 106  
   elective surgery, 373  
   with Fournier's gangrene, 94  
   gastric, 220  
   with haemangiomas, 255, 657-658, 726  
   hospital-acquired, 44, 195  
   with lymphangioma, 651, 654  
   with lymphoedema, 732  
   Marjolin's, 220, 667, 733  
   mucosal, 195, 388, 431, 461, 463, 504  
   with noma, 730  
   oesophageal, 506  
   in parasitic infections, 141, 144, 145, 146  
   peptic ulceration, 372-375, 398-399, 489  
   with Peyer's patches, 104

- Ulcers (*continued*)  
 pressure, 40, 43, 44, 196, 666, 733-734  
 rectal, 468  
 with sickle cell disease, 37, 38  
 skin, 37, 332, 430, 665  
 with spina bifida, 704  
 tubercular, 112-116  
 with umbilical hernia, 355  
 venous, 37, 42, 661
- Ulcerative colitis, 95-96, 443-446, 500, 741
- Ultrasonography. *See* Ultrasound.
- Ultrasound, 185, 676, 695, 738  
 for abdominal trauma, 186  
 for acute scrotum, 592  
 for arteriovenous malformations, 661-662  
 for biliary atresia, 477  
 for birth injuries, 229  
 for bladder exstrophy, 530, 532-533  
 for bladder outlet obstruction, 585-587  
 for choledochal cyst, 484-485  
 for cholelithiasis, 487-489  
 for conjoined twins, 750-751, 73  
 cranial, 191  
 for developmental dysplasia of the hip, 249  
 Doppler, 255, 287, 289, 505, 586, 592, 616, 624, 657, 666, 748, 751, 773  
 for gastrointestinal duplication, 398  
 guidance, 675, 701  
 for haemangiomas, 657, 659  
 for infantile hypertrophic pyloric stenosis, 369  
 for intracranial pressure, 701  
 for intussusception, 406-408  
 for kidney disease, 510-511, 524, 530, 704-705  
 for kidney tumours, 598  
 for liver tumours, 623-624, 626  
 for lymphangiomas, 649-652  
 for musculoskeletal trauma, 208  
 for obstructive jaundice, 473  
 for ovarian lesions, 686-688, 690  
 for pancreas evaluation, 492, 495  
 prenatal, 538, 674, 695, 746-749  
 for reconstructive surgery, 726  
 for reproductive tract anomalies, 679  
 for salivary gland diseases, 255, 259  
 for spina bifids, 701  
 for teratomas, 602-603  
 for tonsillitis, 760  
 for transplantation, 769, 773  
 for transverse vaginal septum, 674  
 for thyroid gland, 262  
 for unilateral limb enlargement, 666  
 for ureteropelvic junction stenosis, 513-516  
 for urethral valves, 538-539  
 for urinary tract abnormalities, 518-521  
 for urolithiasis, 566-567  
 for vesicoureteric reflux, 524, 704
- Umbilical cord care, 48, 124-127, 352-353, 356, 530
- Umbilical hernia, 3, 124, 126, 265, 336, 348-349, 352, 354-356, 393
- Umbilical vein, for venepuncture, 47, 48, 53
- Umbilicus, 48, 93, 124-127, 348-350, 352-356, 389-391, 750
- Undernutrition, management of, 31-32
- Undescended testis. *See* Testis, undescended.
- Upper airway assessment, 273
- Upper airway infection, 56, 651
- Upper airway injury, 215
- Upper airway obstruction, 67-68, 273, 277-281, 308, 330, 729
- Urachus, 3, 125, 352-354, 356, 390, 581-584, 649
- Ureteral agenesis, 678
- Ureteral duplication, 518-522, 525, 673
- Ureteral obstruction, 204, 520-521, 583, 672
- Ureteric reimplantation, 203, 520-522, 525, 526, 533, 535, 587
- Ureterocolices, 518-519, 521-522
- Urethral agenesis, 582
- Urethral atresia, 582
- Urethral catheter, 105, 176-177, 184, 195, 201, 204, 373, 408, 459, 549, 584
- Urethral discharge, 591, 593
- Urethral duplication, 562, 582, 583, 587
- Urethral fistula, 455, 457, 468, 551-552, 741
- Urethral injury, 200-201, 204-205, 206, 557
- Urethral meatus, 177, 201, 205, 528-529, 541-552, 555, 562
- Urethral mucosa, 528-529, 532, 541, 546
- Urethral obstruction, 200, 354, 539, 581, 749
- Urethral opening, 518-519, 521, 529, 532, 535, 541-544, 546, 576, 673
- Urethral plate, 532, 541, 542-544, 547, 549-552
- Urethral polyps, 583
- Urethral reconstruction, 535, 547, 550-551, 578
- Urethral sphincter, 518, 582, 586
- Urethral stenosis, 551, 560-562
- Urethral stent, 532, 534, 546
- Urethral stricture, 200, 204, 532, 582, 584, 587
- Urethral valves, posterior, 200, 354, 513, 518-519, 521, 523-524, 538-540, 543, 565, 581-583, 586-587, 749
- Urethrocytography, 201, 585
- Urethrocytostomy, 201-202, 539, 567
- Urethrovaginal fistula, 205, 673
- Urinary obstruction, 24, 202, 602, 676
- Urinary stones, 526, 565-567
- Urinary tract anomalies, 368
- Urinary tract infection  
 and anorectal malformations, 457  
 antibiotic therapy for, 514, 567, 675  
 and autonomic dysreflexia, 197  
 and bladder outlet obstruction, 584, 586-587  
 in child abuse, 225  
 in conjoined twins, 754  
 and circumcision, 555  
 and epididymitis, 590  
 and hypospadias, 546  
 and labial agglutination, 683  
 and neuroblastoma, 610  
 and osteomyelitis, 135  
 and phimosis, 560-561  
 and pyocolpos, 67  
 and sickle cell disease, 35, 37-38  
 and spina bifida, 704-705  
 and spinal cord injury, 196  
 and urachal anomalies, 354  
 and ureterocolices, 521  
 and ureteropelvic junction stenosis, 514-516  
 and urethral duplication, 583  
 and urethral obstruction, 539  
 and urethral stricture, 584  
 and urolithiasis, 565-566  
 and vesicoureteral reflux, 514, 519-520, 522, 523-527
- Urinary tract obstruction, 749
- Urogenital anomalies, 748-749
- Urogenital sinus  
 aetiology, 465, 538, 678-679  
 embryology, 377, 518, 528, 581, 672-673  
 persistent, 673-675  
 repair, 575, 577
- Urogenital tract  
 abnormalities, 582  
 conjoined twins, 753  
 injury to, 200-206
- Urogenital trauma, 200-206
- Urography  
 excretion, 146, 514
- Urography (*continued*)  
 intravenous, 201, 230, 511, 519, 525, 566, 585, 598, 679
- Urolithiasis, 526, 565-567
- Urological anomalies, 541, 544, 578, 582
- Urological complications  
 with spinal cord injury, 197  
 with spina bifida, 704-706
- Urological evaluation, 37, 514-515, 562
- Urological injuries, 200, 206
- Uterocolices, 518-522, 581, 583, 586-587, 749
- Uterine canal atresia, 757
- Uterine duplication, 601, 678-681
- Uteropelvic atresia, 510
- Uteropelvic junction stenosis, 202, 513-517, 524, 540

## V

- Vaccination, 38, 108, 144, 146, 216, 242, 630, 667, 712, 716, 756, 767, 775  
 antirabies, 729  
 hepatitis, 38, 630  
 influenza, 280  
 measles-mumps-rubella, 256  
 pneumococcal infection, 186, 189  
 polio, 716, 718, 721  
 rotavirus, 404-405  
 tuberculosis, 96, 113, 118  
 typhoid fever, 108
- VACTERAL sequence, 24, 306
- Vacuum-assisted closure, 100, 667, 725
- Vagina, 518, 590, 615, 673-675  
 absence of, 678, 680, 682  
 anomalies, 676, 678, 680  
 bleeding from, 187, 225, 686  
 discharge from, 187, 225, 686  
 disorders of sex development, 574, 576-578  
 hydrocolpos, 672-674  
 inspection of, 187, 205, 230, 686  
 obstruction, 573, 582, 672-673, 675-676, 683  
 reconstruction, 675  
 tumour, 615-616  
*See also* Vaginal entries.
- Vaginal agenesis, 678, 680
- Vaginal atresia, 573, 582, 672-675, 683
- Vaginal delivery, 15, 351, 649, 680, 747, 751, 762
- Vaginal duplication, 601, 678-681
- Vaginal hydrocele, 359, 363-364
- Vaginal plate, 673
- Vaginal septum, 225, 672-676, 680
- Vaginal stenosis, 205, 675
- Vaginoplasty, 535, 578, 675, 680
- Valgus deformities, 704, 719
- Varices, 479, 503-507, 623, 766, 769
- Varicocolices, 590, 592
- Varus, 710-711, 716, 719
- Vascular access, 47-53, 173-174, 752
- Vascular thrombosis, 130, 641
- Vasoactive drugs, 70, 348
- VATER syndrome, 24, 727
- Venepuncture, 47-48, 50, 52
- Venous access, 47-53, 70, 72, 96, 173, 342, 427, 613, 621, 771-772
- Venous cannulation, 54, 173-174
- Venous cutdown, 49, 53
- Ventilation systems, 47, 57-58, 68-73, 172-173, 273-274, 293, 311  
 and chylothorax, 343  
 and meconium ileus, 401-402  
 postoperative, 10, 72, 326, 629, 653, 769, 773  
 and tracheomalacia, 283-284  
 and trauma care, 21, 72, 181, 196, 215, 729
- Ventriculoperitoneal shunt, 355, 696, 701, 703, 706

- Venturi mask, 68
- Vesicoureteric reflux, 511, 518, 520, 523-527, 529, 544, 555, 565, 567, 581, 586, 587, 704
- Vibrio fulnificus*, 130
- Violence, as cause of injury, 31, 159, 200, 226, 729
- Viral infection, 71, 757  
 in burn wounds, 219  
 in glandular fever, 281  
 and hydroceles, 363  
 and intussusception, 406  
 in lymphadenopathy, 241, 243-245  
 in lymphangiomas, 649, 61  
 and obstructive jaundice, 472-473  
 posttransplant, 771
- Vital signs, 22, 60, 63, 72, 173-176, 185, 191, 202, 216, 773
- Vitelline duct, 352-354, 376, 389-391
- Vocal cord palsy, 272, 278, 761, 762
- Volvulus, 143, 353, 376, 382, 385-387, 389-391, 398, 402, 437, 487  
 investigations, 394-395  
 midgut, 31, 311, 376-380, 382, 384, 386, 388, 393-396, 412, 424, 427  
 neonatorum, 393-394  
 sigmoid, 412, 414-415
- von Hippel-Lindau disease, 510, 660
- Vulvoplasty, 535, 680
- W**
- Warthin's tumour, 254, 259
- Wilms' tumour, 3, 202, 243, 511, 597-600, 609, 614, 623
- Wireless information transfer, 779
- Wound closure, 44, 107, 122, 214, 258, 658, 713, 724, 752, 754  
 in achalasia, 321
- Wound closure (*continued*)  
 in burns, 214, 217, 219-220  
 in lymphadenopathy, 242  
 in necrotising fasciitis, 132-133  
 in osteomyelitis, 136  
 primary, 294, 336, 349, 351, 667, 713, 730  
 secondary, 126, 754  
 vacuum-assisted, 100, 667, 725
- Wound infection, 40, 42-44, 92, 94, 209-211, 712-713, 719  
 in burns, 218-220  
 femoral hernia, 363  
 gastrointestinal stoma, 430, 432-433  
 hydrocele, 363-364  
 inguinal hernia, 362  
 and laparoscopy, 489, 739  
 lymphangiomas, 651, 653  
 postoperative, 335, 362, 370, 430, 587, 598, 651, 675, 689, 719
- Wounds  
 in anorectal conditions, 468  
 burn, 214, 219  
 care, 44, 45, 52, 100, 126, 132, 138, 209, 216-218, 730  
 chronic, 42-43, 45, 98, 215, 725, 732  
 classification of, 98-99, 713  
 cleansing of, 93, 209-210, 212, 697, 713  
 closure. *See* Wound closure.  
 complex, 42-43, 45, 725  
 contaminated, 93, 100-101, 209, 459, 712-713  
 debridement, 57, 94, 209, 218, 713, 725  
 dehiscence, 30, 100, 107-108, 391, 420, 441, 535, 703, 774  
 dehydration due to, 28  
 diabetic, 40  
 drainage, 99, 138, 187, 702  
 erythema, 99
- Wounds (*continued*)  
 and gas gangrene, 93  
 and granulation, 41, 100  
 healing, 10, 30, 33, 40-45, 138-139, 211, 217, 619, 714, 733  
 hospital-related, 94  
 infection. *See* Wound infection.  
 and necrotising fasciitis, 126, 131-132  
 nosocomial, 99  
 and nutrition, 10, 30, 33, 44, 211, 217  
 open, 93-95, 98, 168-169, 209, 211-212, 532, 546, 712-713, 721  
 pain control, 62, 64, 361  
 penetrating, 95-96, 157-159, 180-182, 187, 190, 200, 203-204  
 postoperative complications, 93, 99-100, 335, 362, 370, 391, 420, 651, 662, 675  
 puncture, 713, 721  
 scarless repair, 40, 42  
 scarring, 42  
 sepsis, 441, 452, 752  
 stabbing or gunshot, 157, 159, 180, 187, 190, 200, 203-204  
 surgical site infection, 98-101, 107, 409  
 infection.  
 therapy, 43-44  
 in tuberculosis, 117
- Wrist, cannulation at, 48
- Wuchereria bancrofti*, 244, 664, 732
- X**
- Xerostomia, 254-257, 617
- X-ray. *See* Radiography.
- Y**
- Yersinia enterocolitica*, 444
- Yersinia* sp., 120