

Index

- abdominal wall *see* anterior abdominal wall;
 anterolateral abdominal wall
- achalasia 29, 154
- Achilles tendon 70
- acromegaly 3, 61
- acute myocardial infarction 83
- adenocarcinoma 29, 154
- Allen's test 5, 74
- anaesthesia; *see also* blocks
 acromegaly 61
 carotid endarterectomy 110–111
 eye surgery 144
 inguinal hernia repair 89
 intercostal space 53–55
 larynx 91
 oesophagus 59
 upper limbs 116
 vagus nerve effects 80
- anastomoses 153
- aneurysms, intracranial vascular 6
- ankle
 block 4, 69–70
 nerves 4, 24, 69–70, 145
 structure 70
- ansa cervicalis 16, 154–155
- anterior abdominal wall 13–14, 101–103
- anterior cranial fossa 150
- anterior spinal artery syndrome 28, 152
- anterior tibial artery 140
- anterior triangle, neck 24, 145
- anterolateral abdominal wall 16, 24, 112–113, 145
 nerves 113
- arcuate ligaments 155
- arms *see* upper limbs
- arteries
 AV nodal 82
 axillary 149–150
 brachial 157
 carotid 2, 51–52, 77
 common interosseous 149–150
 coronary 81–83
 femoral 139–140, 147
 hepatic 162–163
 lower limbs 139–141
 oesophagus 58–59
 palmar arches 74
 peroneal 147
 popliteal 147
 radial 74, 149–150
 SA nodal 82
 spinal 119
 subclavian 149–150
 tibial 147
 ulnar 74
 upper limbs 149–150
- aspiration 1–2, 44–45
- atrioventricular (AV) nodal artery 82
- auditory meatus/canal 25, 146–147
- auriculotemporal nerve 134
- autonomic dysreflexia 25, 146
- axillary artery 149–150
- axillary block 1, 30, 41–42, 155–156
- axillary nerve 116
- biceps tendon 157
- birth, physiological changes 137
- blocks, nerve
 ankle 4, 69–70
 axillary 1, 30, 41–42, 155–156
 brachial plexus 1, 30, 42, 75–76, 155
 caudal 130–132
 epidural 2
 eye 23, 144
 fascia iliaca 2, 49–50
 forearm 100
 interpleural 19, 126
 interscalene 17, 116
 lumbar plexus 3, 56–57
 neuroaxial 29, 131, 154
 paravertebral 12, 97–98
 popliteal fossa 3, 64–65
 rectus sheath 13–14, 101–103
 retrobulbar 144
 scalp 20–21, 26, 133–135, 147–148
 sciatic nerve 32, 159
 sub-Tenon's 144
 transversus abdominis plane 16, 113–114, 145
 ulnar nerve 13, 100
- blood supply
 bowel 33, 162–163
 hand 5, 73–74
 liver 33, 162–163
 lower limbs 22–23, 25, 139–141, 147
 spinal cord 119
 upper limbs 5, 27, 73–74, 149–150
- Boerhaave's syndrome 29, 154
- bowel, blood supply 33, 162–163
- brachial artery 157
- brachial plexus 1, 6, 13, 17, 28, 116, 151
 blocks 1, 30, 41–42, 75–76, 153
- brain herniation 1, 38
- brainstem death organ donation 1, 38–39
- breathing/ventilation 14, 105–106
- bronchial circulation 26, 149
- bronchial tree 1–2, 43–44
- bronchial vein 149
- Brown-Séquard syndrome 26, 148–149
- cardiac structure 8, 32, 81–83, 153–160
- carina 24, 44, 148
- carotid artery 2, 51–52, 77
- carotid endarterectomy 16, 109–111
- carotid sheath 28, 152
- caudal block 130
 complications and contraindications 131–132
- cavernous sinus 86–87
- central cord syndrome 27, 150
- central tendon 85
- cerebellar herniation 1, 38
- cerebral artery 6, 77

Index

- cervical plexus 16, 29, 109–110, 154–155
 cervical spine fractures 108
 cervical vertebrae 15
 chest drains 2, 53–55
 circle of Willis 6, 77–78
 circulation, coronary 8, 28–29, 81–83, 153–160; *see also* fetal circulation
 clavicle 1
 common interosseous artery 149–150
 coronary arterial dominance 82
 coronary artery 81–83
 coronary circulation 8, 28–29, 32, 81–83, 153–160
 costal cartilages 25, 146, 153–160
 costodiaphragmatic/
 costomediastinal recesses 125
 cranium; *see also* skull
 dural venous circulation 33, 162
 fossae 72
 nerves 4–5, 71, 134
 structure 4–5, 72
 sutures 27, 150–151
 trauma 72
 cricoid cartilage 145
 cubital fossa 19, 31, 127–128, 157
 inadvertent intra-arterial injection 128–129
 superficial veins 128
 Cushing's reflex 38

 deep cervical plexus 16, 29, 109–110, 154–155
 deep peroneal/fibular nerve 70
 desmopressin 38–39
 diaphragm 8, 29–30, 84–85, 155
 dorsal pedis artery 70
 dorsal root ganglion 163–164
 dural venous sinuses 2, 9, 33, 86–87, 162

 endothoracic fascia 150
 eparterial bronchus 151
 epidural 2
 epidural space 2, 31, 46–47, 158
 epiglottis 158–159
 ethmoid air sinuses 150
 ethmoid bone 151–152
 extensor retinaculum 70

 eye; *see also* orbit
 blocks 23, 144
 muscles 29, 153–154
 nerve supply 23, 144

 fascia iliaca, block 2, 49–50
 femoral artery 139–140, 147
 femoral nerve 33, 56–57, 160–162
 femoral triangle 2, 33, 48–49, 161–162
 fetal circulation 21, 30–31, 137, 157–158
 changes at birth 137
 foramen ovale 137–138
 paradoxical embolus 138
 fetal shunts 157–158
 first rib 105
 fontanelle 150–151
 foramen magnum 1, 37, 46–47
 foramen ovale 137–138, 157
 frontal bone 151–152

 genitofemoral nerve 56–57
 great auricular nerve 110, 134
 greater occipital nerve 134
 groin 2, 33, 48–49, 161–162

 hand, blood supply 5, 73–74
 heart; *see also* coronary circulation; myocardial infarction
 neurocardiology 33, 161
 structure 8, 32, 81–83, 153–160
 hemidiaphragm, raised 85
 hepatic artery 162–163
 hernia repair, inguinal 10, 20, 89, 130
 herniation, brain 1, 38
 hypoglossal nerve 34, 164
 hypothalamo-hypophyseal portal venous system 3, 61

 iliohypogastric nerve 56–57
 inguinal region 10, 20, 88–89, 130
 innervation *see* nerves
 insulin 38–39
 intercostal drains 2, 53–55
 intercostal space 2, 53–55
 intercostobrachial nerve 41–42, 155–156
 internal jugular vein (IJV) 2, 32–33, 51–52, 161–162
 interpleural block 19, 126

 interscalene block 17, 116
 neurological complications 116–117
 intra-arterial injection, inadvertent 128–129
 intracranial vascular aneurysms 6, 78
 intraosseous access 141
 ischaemia 153
 spinal cord 18, 120

 jugular foramen 7, 80
 jugular vein *see* internal jugular vein

 knee extension 159

 lambda 150–151
 laparotomy 2, 47
 laryngeal nerves 90–91
 larynx 10, 24, 31, 90–91, 146, 158–159
 lateral cutaneous nerve 56–57
 lateral pectoral nerve 116
 lesser occipital nerve 110, 134
 levator palati 159
 liver
 blood supply 33, 162–163
 structure 11, 92
 lower limbs
 arteries 141
 blood supply 22–23, 25, 139–141, 147
 nerves 4
 lumbar plexus 3, 32, 49–50, 56–57, 159
 block 3, 56–57
 lumbar triangle 24, 145
 lumbar vertebrae 15
 lungs 1–2, 26, 44–45, 148; *see also* bronchial circulation
 right, root 27, 151

 maxilla bone 151–152
 maxillary air sinus 150
 median nerve 41, 100, 157
 methylprednisolone 38–39
 mid-inguinal point (MIP) 140, 160–161
 midpoint of the inguinal ligament (MPIL) 140, 160–161

Index

- muscles
 anterolateral abdominal wall 112–113
 eye 29, 153–154
 intercostal space 53–55
 rectus abdominis 25, 101–102, 147
 trigeminal nerve 32, 159
 musculocutaneous nerve 1, 41, 116, 164
 myocardial infarction, acute 83
 myocardium 82
- nasal bone 151–152
 nasal cavity 12, 95–96
 nasal intubation 12, 96
 nasal nerves 95–96
 neck, anterior triangle 24, 145
 nerves; *see also* blocks
 ankle 4, 24, 69–70, 145
 anterolateral abdominal wall 113
 axillary 116
 cranial 4–5, 71, 134
 diaphragm 85
 femoral 33, 56–57, 160–162
 genitofemoral 56–57
 great auricular 110, 134
 greater occipital 134
 hypoglossal 34, 164
 iliohypogastric 56–57
 intercostobrachial 41–42, 155–156
 laryngeal 90–91
 lateral cutaneous 56–57
 lateral pectoral 116
 lesser occipital 110, 134
 median 41, 100, 157
 musculocutaneous 1, 41, 116, 164
 nasal 95–96
 obturator 49–50, 56–57
 occipital 147–148
 oculomotor 29, 153–154
 oesophagus 58–59
 phrenic 8, 85, 154–155
 pleural membranes 126
 popliteal fossa 33, 163
 radial 13, 30, 41, 99, 156, 164
 recurrent laryngeal 163
 saphenous 69, 145, 159
 scalp 133–135
 spinal 2, 34, 54, 163–164
 supraclavicular 110, 116
 sural 70, 145
 thigh 161–162
 thoracic spinal 34, 164–165
 tibial 69–70
 transverse cervical 110
 trigeminal 18, 30, 121–122, 156–157
 ulnar 41, 100, 164
 upper limbs 13, 34–35, 99–100, 164–165
 vagus 7, 10, 34, 79–80, 91, 163
 neuroaxial blocks 29, 131, 154
 neurocardiology 33, 161
 node of Cloquet 48–49
 nose, structure 12, 31, 95–96, 158
- obturator nerve 49–50, 56–57
 occipital nerve 147–148
 occlusive strokes 6, 78
 oculomotor nerve 29, 153–154
 oesophagus 3, 30, 58–59, 156
 arteries 58–59
 nerves 58–59
 pathology 29, 154
 sphincters 28, 152
 veins 58–59
 optic canal 143
 orbit; *see also* eye
 margin/rim 28, 151–152
 oculomotor nerve 29, 153–154
 relations 27, 150
 structure 23, 30, 143–144, 156
 osteo-ligamentous structure 37
- palmar arches 74
 palsy 38
 paradoxical embolus 138
 paranasal sinuses 12, 31, 95–96, 158
 paravertebral block 12, 97–98
 paravertebral space 12, 27, 97–98, 150
 parietal pleura 125, 150
 peribulbar block 144
 pericardium 153–160
 peroneal artery 147
 pharyngeal plexus 159
 phrenic nerve 8, 85, 154–155
 pituitary gland 3, 60–62
 pleural membranes 19, 26, 125, 148
- costodiaphragmatic/
 costomediastinal recesses 125
 interpleural block 126
 nerves 126
 surface markings 125
 pleuroperitoneal membranes 155
 pneumonitis 1–2, 45
 popliteal artery 147
 popliteal fossa 3, 32, 64–65, 159
 nerves 33, 163
 veins 33, 163
 portosystemic anastomosis 11, 92–94
 posterior tibial artery 140
 proximal anterior thigh 32, 160–161
 psoas major muscle 56
 pterion 26, 149, 151
 pulmonary ligament 148
 pulmonary plexus 151
- radial artery 74, 149–150
 radial nerve 13, 30, 41, 99, 156, 164
 raised hemidiaphragm 8
 rectus abdominis muscle 25, 101–102, 147
 rectus sheath block 13–14, 101–103
 recurrent laryngeal nerve (RLN) 163
 respiratory tree 1–2, 44
 retrobulbar block 144
 ribs 14, 25, 104–105, 146
 right coronary artery (RCA) occlusion 82
 right lung root 27, 151
- SA (sinoatrial) nodal artery 82
 sacral hiatus 46–47, 131
 sacral plexus 159
 sacrum 20, 130–131
 saphenous nerve 69, 145, 159
 saphenous vein 70, 140–141, 145
 scalp 20–21
 block 20–21, 26, 133–135, 147–148
 nerves 133–135
 sciatic nerve 3, 64
 block 32, 159
 secondary cartilaginous joints 108
 septum transversum 155
 shoulder joints 17

Index

- shunts 149
 fetal 157–158
 sinoatrial (SA) nodal artery 82
 sinuses 150
 cavernous 86–87
 dural venous 2, 9, 33, 86–87, 162
 paranasal 12, 31, 95–96, 158
 skull 1, 4–5; *see also* cranium
 skull, base 71
 sphenoid air sinus 150
 spinal artery 119
 spinal column 15, 108;
 see also vertebrae
 spinal cord 18
 anterior spinal artery
 syndrome 28, 152
 autonomic dysreflexia 25, 146
 blood supply 119
 Brown–Séquard syndrome
 148–149
 central cord syndrome 27, 150
 children 154
 ischaemia 120
 tracts, ascending and
 descending 119
 spinal nerves 2, 34, 54,
 163–164
 thoracic 34, 164–165
 strokes, occlusive 6, 78
 subclavian artery 149–150
 sub-Tenon's block 144
 superficial cervical plexus *see*
 cervical plexus
 superficial peroneal/fibular
 nerve 70
 superior costotransverse
 ligament 150
 superior orbital fissure 143–144
 supraclavicular nerve 110, 116
 supraorbital nerve 133
 supratrochlear nerve 133
 sural nerve 70, 145
 sutures, cranium 27,
 150–151
 synovial joints 108
 TAP *see* transversus abdominis
 plane blocks
 tentorium cerebelli 162
 Thebesian valve 153–160
 thiopentone, inadvertent
 intra-arterial injection
 128–129
 thoracic spinal nerves 34,
 164–165
 thoracic vertebrae 15
 thorax 67
 thyroid hormone 38–39
 tibial artery 147
 tibial nerve 69–70
 TIPSS *see* transjugular
 intrahepatic portosystemic
 shunt
 tonsillar herniation 1, 38
 trachea 3, 24, 66–67, 146
 tracheostomy 3, 67
 transjugular intrahepatic
 portosystemic shunt
 (TIPSS) 11, 94
 transsphenoidal approach,
 pituitary gland 61–62
 transversus abdominis plane
 (TAP) block 16, 113–114,
 145
 transverse cervical nerve
 110
 trefoil tendon 85
 trigeminal nerve 18, 30,
 121–122, 156–157
 muscles 32, 159
 sensory supply 122
 trigeminal neuralgia 122
 causes 123
 management 123
 risk factors, diagnosis
 122–123
 Tuohy needle 2, 47
 ulnar artery 74
 ulnar nerve 41, 100, 164
 block 13, 100
 umbilical artery 158
 umbilical vein 21, 137
 upper limbs 13, 17, 99–100, 116
 arteries 149–150
 blocks 13, 17, 99–100, 116
 blood supply 5, 27, 73–74,
 149–150
 nerves 13, 34–35, 99–100,
 164–165
 upper respiratory tract 24
 vagus nerve 7, 34, 79–80, 163
 larynx 10, 91
 valve of Vieussens 153–160
 vasopressin 38–39
 veins
 bronchial 149
 cubital fossa 128
 internal jugular 2, 32–33,
 51–52, 161–162
 oesophagus 58–59
 popliteal fossa 33, 163
 saphenous 70, 140–141, 145
 spinal 119
 umbilical 21, 137
 ventilation/breathing 14, 105–106
 vertebrae 15, 108; *see also* spinal
 column
 vestibular ganglion 146–147
 visceral pleura 125
 Willis, circle of 6, 77–78
 zygomatic bone 151–152
 zygomaticotemporal nerve
 133–134