INDEX

abdominal aortic aneurysms (AAA) 21–6, 90, 126
aetiology 21–2, 90
clinical features 23
diagnosis 23
differential diagnosis 91
investigations 91
prognosis 23–5, 93
risk factors 90
rupture 90–3
management in A&E 91–3
presentation in A&E 90–1
screening 25–6
treatment options 25, 92–3
see also abdominal aortic surgery; endovascular aneurysm repair
abdominal aortic surgery 126–8, 157–9, 165–8
anaesthesia 156–7
special requirements 158–9
assessment 157–8, 163–4
complications 167–8
emergency surgery 157–8, 159–60
post-operative management 93–4, 160
pre-operative management 159
indications 165
operative technique 166–7
post-operative care 127–8
pre-operative care 127
premedications 158
thoraco-abdominal aneurysm repair 168–69
see also abdominal aortic aneurysms (AAA)
above-knee amputation 185–6
see also amputations
acute limb ischaemia 94–5
aetiology 94
classification 94
definition 94
diagnosis 95
investigations 95
management 95–6, 120–1
presentation 95
prognosis 96
revascularisation 96
surgical intervention 96
acute mesenteric ischaemia 68–9
advice 222–3
age
as cardiovascular risk factor 4
post-operative complications and 211
amaurosis fugax 17
amputations 130–8, 182–7, 184–9
assessment 184
complications 188–9
double amputees 135–7
in diabetes 58, 130
indications 184
mobilisation 131
operative technique 185–6
above-knee amputation 185–6
below-knee amputation 186–9
toe amputation 187–8
transmetatarsal (forefoot) amputation 187
prosthetic phase 131–8
immediate post-operative prostheses (IPOP) 131
prosthetic construction 132–5
temporary prostheses 132
amputations (cont’d)
  rehabilitation 130–1
  upper limb 137–8
anaesthesia
  abdominal aortic surgery 157–9
  emergency surgery 159–60
  special requirements 158–9
  carotid endarterectomy 155–7
  general anaesthesia 156
  local anaesthesia 157
  post-operative care 201–6
  regional 214
  revascularisation of the lower limbs 160–1
vascular patient considerations 154–5
analgesia 140, 213–14
  adjunctive 144
  epidural 142–3, 214
  patient controlled (PCA) 131, 143–4, 213
see also pain management
aneurysms 23
  screening 25–6
see also abdominal aortic aneurysms
(AAA); popliteal aneurysms
angiography 111–13, 116, 123
  carotid artery 18
  post-procedure care 123
  pre-procedure care 123
angioplasty 124
  balloon angioplasty 113–15
  aftercare 114–15
  complications 113
  carotid artery 115
  chronic limb ischaemia
ankle brachial pressure index (ABPI) 10–11
  interpretation 11
antiplatelet medication 7, 8
aortic cross-clamping 159
aorto-bi-femoral bypass for occlusive
  disease 169–70
  assessment 169–70
  complications 171
  indications 169
  operative technique 170–1
arterial blockage 53
arterial examination 105–6
arterial leg ulcers see leg ulcers
arterial stenosis 53
aspirin 7, 8
assessment see pre-assessment
atheromatous plaques 3
atherosclerosis 3–4, 51
  aneurysms and 22
  carotid arteries 16
  signs and symptoms 4
  audit 238, 241–6
  audit cycle 242
  comparing practice with standard
  practice 244
  data collection 244
  definition 241
  modifying practice 244–5
  setting criteria and standards 243
what to audit 243
axillo-femoral bypass 177
balloon angioplasty 113–15
  aftercare 114–15
  complications 113
bandages
  elastic 45
  inelastic 49
  multi-layer lymphoedema bandaging
  (MLLB) 86
below-knee amputation 186–7
see also amputations
blood pressure, post-operative 203
see also hypertension
brachial embolectomy 190
Buerger’s disease (thromboangiitis
  obliterans) 34–5
bypass procedures see revascularisation,
  lower limb
cancellation prevention 153
CAPRIE Trial 7
  cardiovascular risk factors 4–8
  age 7
  diabetes 6
  gender 7
  hyperlipidaemia 6–7
  hypertension 6
  role of nurses in management 7–8
smoking 5
cardiovascular support, post-operative
  207–8
care pathways see integrated care
  pathways (ICPs)
INDEX

carotid artery 115
gangioplasty and stenting 115
disease 16–20
investigations 18
examination 104
carotid endarterectomy 18, 124–6, 155–7, 162–5
anaesthesia 155–7
assessment 156, 162
complications 164–5
indications 162
operative technique 162–4
post-operative complications 125–6, 157
haemorrhage 126
hypertension 125
hypotension 125
nerve injury 126
stroke 126
post-operative management 157
pre-operative care 125
pre-operative investigations 124
Charcot arthropathy 66–7
cholesterol level
as cardiovascular risk factor 6–7
lowering 7, 8
chronic limb ischaemia (CLI) 12–13
clinical features 12
management 12–13
see also lower limb ischaemia (LLI)
chronic mesenteric ischaemia (CMI) 69
chronic obstructive pulmonary disease (COPD), anaesthesia and 155
cigarette smoking see smoking
circulating nurse responsibilities 197–8
duties before operation 197
duties during operation 197–8
duties on completion of operation 198
clinical audit see audit
clinical governance 234–9
clinical risk management 237–8
patient involvement 235
patient’s and relatives’ experiences 236
process 234–5
research and effectiveness 238–9
staffing and staff management 236–7
training and continuous professional development 237
see also audit
clopidogrel 7, 8
colour flow ultrasound 104
compression therapy
lymphoedema management 84–5
varicose veins 73–4
venous leg ulcers 45–51
compression hosiery and aftercare 49–50
elastic bandages 45
factors affecting compression 50–1
inelastic bandages 49
computed tomography (CT) 110–11, 116
cosmetic level 203–5
cord 239
continuous professional development 237
contrast 117
critical care units (CCUs) 203
discharge from 218
muscle weakness 217
nutritional issues 217
patients who are sedated 216
prolonged stay 217
psychological disturbances 217–18
see also post-operative care
cross over femoro-femoral bypass 177
cross-clamping, aortic 159
deep vein thrombosis (DVT) 75–8
causes of 75
clinical features 76
complications 78
diagnosis 77
prevention 77
risk factors 76
treatment 77
deterioration, sudden 208
monitoring 208–11
diabetes
amputations and 57, 130
anaesthesia and 155
as cardiovascular risk factor 6, 13
management 6, 8
post-operative complications and 212
St. Vincent’s declaration 57
diabetic foot 57–67
Charcot arthropathy 66–7
clinical features 57–8
callus or deformities 58
decreased resistance to infection 58

© Cambridge University Press  www.cambridge.org
INDEX

diabetic foot (cont’d)
clinical features (cont’d)
peripheral neuropathy 57
peripheral vascular disease 58
diabetic ulcers 58–62
management 58–65
see also diabetes
discharge planning 153
Doppler ultrasound 102
advantages 108
ter examination 106
adverse effects 108
varicose vein investigation 72
duplex scan 104
ter examination 105–6
carotid artery 18
varicose veins 72
education see patient education; staff education
elastic bandages 45
embolectomy 189–90
brachial 190
femoral 189–90
emboli, postoperative 216
embolisation 119
endarterectomy see carotid endarterectomy
endoscopic thoracic sympathectomy 41–2, 179–80
assessment 179
benefits 42
complications 42, 180
indications 179
operative technique 179
endovascular aneurysm repair 25, 116
emergency 93
see also abdominal aortic aneurysms (AAA)
epidural analgesia 142–3, 214
ethics governance 239
exercise 8
lymphoedema management 84
femoral embolectomy 189–90
femoro-popliteal bypass grafts 171–2
assessment 171
complications 172
indications 171
operative technique 171–2
femoro-tibial bypass grafts 172–5
assessment 172
complications 175
indications 172
operative technique 173–4
forefoot amputation 187
gangrene 12, 57
governance 234
see also clinical governance
haemorrhage, post-operative 126, 215
health education see patient education
heart disease, anaesthesia and 154–5
hyperhydrosis 40–2
definition 40
management 41–2
endoscopic thoracic sympathectomy 41–2, 179–80
primary 40
manifestations 40–1
secondary 40
hyperlipidaemia
as cardiovascular risk factor 6–7
lipid lowering 7
hypertension
anaesthesia and 154
as cardiovascular risk factor 6
management 6, 8
post-operative 123
hypotension, post-operative 123
inelastic bandages 49
informed consent 239
integrated care pathways (ICPs) 226–33
benefits of 227, 232–3
categories 228
criticisms of 227–8
definition 226–7
implementation of 233
key to success 232–3
purpose 227
quality control 232
variances 228
intermittent claudication 4, 8, 51
management 11, 12
smoking cessation 5
invasive positive pressure ventilation (IPPV) 206, 207
investigations see specific conditions; vascular laboratory
iontophoresis 41
ischaemia, limb see acute limb ischaemia; chronic limb ischaemia; lower limb ischaemia; upper limb ischaemia
ischaemic heart disease (IHD) anaesthesia and 152–3 post-operative complications and 212
kidney disease see renal disease
leg ulcers 43–54 arterial ulcers 51–3 signs and symptoms 51–2 treatment 52–3 wound maintenance 53 mixed aetiology ulcers 53 treatment 53–4 nurse role in outpatient department 54–5 patient assessment 43–4 patient education 55 patient involvement and compliance 54 staff education 54 types of 43 venous leg ulcers 44–51 compression therapy 45–51 signs and symptoms 45 wound management 55 levels of care 200–1
limb ischaemia see acute limb ischaemia; chronic limb ischaemia; lower limb ischaemia; upper limb ischaemia
limb volume measurement, leg 86–7 low-density lipoprotein (LDL) cholesterol, in diabetes 6
lower limb ischaemia (LLI) 8–12 assessment 9–11 management 11 prognosis 11 signs 9 stages 9 symptoms 8–9 lymphatic drainage manual (MLD) 86 simple (SLD) 85, 86
INDEX

pain (cont’d)
phantom pain 131, 145–6
definition and classification 145
incidence 146
treatment 130, 146
pain management 139–46
adjunctive analgesia 144
epidural analgesia 142–3, 214
following amputation 130
patient controlled analgesia (PCA) 131,
143–4, 213
phantom pain 131, 145–6
role of pain clinical nurse specialist
141–3
post-operative pain management
142–4
pre-operative pain management 142
patient controlled analgesia (PCA) 131,
143–4, 213
patient education 222
leg ulcer management 52
peri-operative nursing 194–5
vascular scrub nurse responsibilities
197–8
peripheral arterial disease (PAD)
atherosclerosis 3–4
cardiovascular risk factors 4–8
chronic lower limb ischaemia (LLI) 8–12
see also specific forms of disease
peripheral neuropathy 57
peripheral vascular disease (PVD) 120
in diabetes 58
see also specific forms of disease
phantom pain 131, 145–6
definition and classification 145
incidence 146
treatment 130, 146
popliteal aneurysms 177
repair 177–9
POSSUM scale 244, 245
V-POSSUM 245–6
post-operative care 200–1
abdominal aortic surgery 126–7
basic nursing considerations 203–6
carotid endarterectomy 155
critical care units (CCUs) 203
immediately after anaesthetic 201–2
levels of care 200–1
pain management 142–4, 213–14
patients at risk of sudden
deterioration 208–300
patients who require cardiovascular
support 207–8
patients who require respiratory
support 206–7
revascularisation procedures 128, 160
see also critical care units (CCUs)
post-operative complications 211–6
abdominal aortic surgery 157–9
thoraco-abdominal aneurysm repair 168
amputations 184–7
co-existing medical disease and
211–14
emboli/blockages 216
haemorrhage 126, 215
prolonged procedures 214–15
renal failure 215–16
revascularisation procedures 169, 170,
175, 176
varicose vein surgery 180–2
see also post-operative care
pre-assessment 150–3
abdominal aortic surgery 157–8,
165–6
advantages of 151
amputations 184
cancellation prevention 153
carotid endarterectomy 155, 162
disadvantages of 151
discharge planning commencement 153
discharge planning commencement 153
discharge planning commencement
153
endoscopic thoracic sympathectomy 179
emboli/blockages 216
general aims of 150
haemorrhage 126, 215
i2
Optimum health status achievement
152–3
physical preparation of patients 151
post-operative care which are pre-assessed
151
pre-assessment 151
psychological preparation of patients 152
revascularisation procedures 128, 160–1,
169–70, 170, 171
varicose vein surgery 180
profundoplasty 175–6
complications 175
indications 175
operative technique 175–6

More information
prolonged procedures 214–15
prostheses 131–8
double amputees 135–7
immediate post-operative prostheses
(IPOP) 131
prosthetic construction 132–3
rehabilitation 130
temporary (pneumatic) prostheses 132
upper limb 137
psychological issues
critical care units 200, 203
patient preparation 150
pulse rate, post-operative 203
quality control 232
Raynaud's phenomenon (RP) 29–33
clinical manifestations 29–30
investigations 31
pathophysiology 29
primary 31
secondary 31
treatment 31–2
drug therapy 32
role of nurse 32
surgical intervention 32
regional anaesthesia 214
rehabilitation, amputees 130, 131
renal disease
anaesthesia and 155
post-operative complications and 211
post-operative renal failure 212
research 223, 235, 238
consent 239
respiratory rate, post-operative 203
respiratory support, post-operative 206
resuscitation 98
revascularisation, lower limbs 128, 154, 160, 169
acute limb ischaemia 94
anaesthesia 160
aorto-bi-femoral bypass for occlusive
disease 167–9
axillo-femoral bypass 176
chronic limb ischaemia 12
cross over femoro-femoral bypass 176
femoral-popliteal bypass grafts 171, 172
femoral-tibial bypass grafts 172–4
post-operative care 127, 159
pre-operative care 125
pre-operative investigations 128, 156
premedication 161
profundoplasty 175
risk management 237
St. Vincent's declaration 57
sapheno-popliteal junction ligation 180–1
screening, for aneurysms 25–6
sedation, in critical care units 216
simple lymphatic drainage (SLD) 81, 82
smoking
as cardiovascular risk factor 5
cessation 5, 7
intermittent claudication and 5
post-operative complications and 211
spinal anaesthesia 212
staff education 222
leg ulcer management 54
lymphoedema clinics 81
training for vascular nurses 224–5
staff management 235–6
statins 7
stents 118
stroke 16–17
haemorrhagic 17
ischaemic 16–17
post-operative 125, 211
subclavian steal syndrome (SSS) 27
support 222–3
sweating, excessive see hyperhidrosis
Takayasu's arteritis 35–6
temperature, post-operative 206
thoracic outlet syndrome (TOS) 37–9
thoracic outlet syndrome (TOS) 37–9
aetiology 37
causes of 37
definition 37
diagnosis 38
neurological symptoms 37–8
treatment 38–9
vascular symptoms 38
thoracic sympathectomy see endoscopic
thoracic sympathectomy
thoraco-abdominal aneurysm repair 168–9
assessment 168
complications 169
INDEX

thoraco-abdominal aneurysm repair (cont’d)
indications 168
operative technique 169
see also abdominal aortic surgery
thromboangiitis obliterans 34–5
thrombolysis 119
thrombophilia 76
toe amputation 187
training 237
for vascular nurses 224, 225
see also staff education
transient ischaemic attack (TIA) 17
transmetatarsal amputation 187
trauma see vascular trauma

ulcers see diabetic foot; leg ulcers
ultrasound 102, 110, 118
arterial examination 105, 106
colour flow ultrasound 104
Doppler ultrasound 102
advantages and disadvantages 108
varicose vein investigation 72
upper limb ischaemia 27–8

V-POSSUM 245–6
varicose veins 69–73
assessment 71, 180
integrated care pathway 227–9
investigations 71–2
pathophysiology 69–70
surgical treatment 179–83
complications 183
indications 180
perforators 183
sapheno-popliteal junction ligation 182, 183
veins affecting long saphenous system 180, 181
treatment options 73
vascular laboratory 102–8
duplex scan 104
examinations 104–8
arterial examination 105, 106
venous examination 106–8
ultrasound 102
colour flow ultrasound 104
Doppler ultrasound 102–3
vascular nurse specialist role 222–3
advice and support 222–3
education 222
research and development 223
training 224–5
vascular pain see pain; pain management
vascular scrub nurse responsibilities 195–7
duties at end of operation 197
duties before operation 195
duties during operation 196–7
vascular instrumentation 195–6
vascular trauma 97–9
diagnosis 99
operative management 100, 189–90
pathophysiology 98
resuscitation 98
signs 99, 100
sites of injury 98
types of injury 97
vasculitis 34–6
Buerger’s disease (thromboangiitis obliterans) 34–5
causes of 34
definition 34
symptoms 34
Takayasu’s arteritis 35–6
vasodilators, Raynaud’s phenomenon treatment 31, 32
venous examination 106, 108
venous incompetence 106
venous leg ulcers see leg ulcers
venous system, legs 70
wound management 54, 55

© Cambridge University Press
www.cambridge.org