

Contents

<i>Contributors</i>		xiv
<i>About the Editors</i>		xviii
<i>Preface</i>		xix
<i>Acknowledgements</i>		xxi
Chapter 1	Learning the Language: Terminology	1
	<i>Ian Peate</i>	
	Introduction	1
	Anatomy and Physiology	2
	Anatomy	2
	Physiology	8
	Terminology	10
	Pathophysiology	11
	The Determinants of Health	14
	Using a Medical Dictionary, Hints and Tips	15
	Summary	17
	References	17
	Further Reading	18
	Online Resources	18
	Glossary	18
	Multiple Choice Questions	18
Chapter 2	Cell and Body Tissue Physiology	20
	<i>Terry Dore and Ian Peate</i>	
	Introduction	20
	Cell Anatomy and Function	21
	The Cell Membrane	22
	The Cytoplasm	23
	The Nucleus	23
	Cellular Reproduction	24
	Differentiation	26
	Cellular Organelles	26
	Body Tissues	28
	The Ageing Process	29
	Summary	30
	References	30
	Further Reading	31
	Online Resources	31
	Glossary	31
	Multiple Choice Questions	32
Chapter 3	Homeostasis	34
	<i>Sadie Diamond-Fox and Alexandra Gatehouse</i>	
	Introduction	34
	Homeostatic Mechanisms	35

	Thermoregulation	36
	Blood Glucose Homeostasis	38
	Arterial Blood Pressure Homeostasis	41
	Plasma Osmolality and Electrolyte Homeostasis	42
	Acid–Base Homeostasis	45
	Blood Partial Pressure of Carbon Dioxide Homeostasis	45
	Summary	48
	References	48
	Further Reading	49
	Online Resources	49
	Glossary	49
	Multiple Choice Questions	50
Chapter 4	Trauma and Inflammation	52
	<i>Kylie Kendrick and Scott Stewart</i>	
	Introduction	52
	Pathophysiology of Trauma and Inflammation	54
	Management	57
	Summary	61
	References	61
	Further Reading	64
	Online Resources	64
	Glossary	64
	Multiple Choice Questions	66
Chapter 5	Shock	68
	<i>Matt Wilkinson-Stokes</i>	
	Introduction	68
	Shock	69
	Pathophysiology of Shock	70
	Burn Shock	76
	Stages of Shock	78
	Identification of Shock	81
	Management of Shock	82
	Summary	85
	Acknowledgement	86
	References	86
	Online Resources	87
	Glossary	87
	Multiple Choice Questions	87
Chapter 6	The Nervous System and Its Associated Disorders	89
	<i>Tom E. Mallinson</i>	
	Introduction	89
	Central Nervous System	90
	Peripheral Nervous System	97
	Disorders of the Nervous System	101
	Traumatic Brain Injury	102
	Stroke	111
	Dementia	113
	Seizures and Epilepsy	117
	Summary	120
	References	120
	Further Reading	121
	Online Resources	122

	Glossary	122
	Multiple Choice Questions	123
Chapter 7	The Cardiovascular System and Its Associated Disorders	125
	<i>Tom E. Mallinson</i>	
	Introduction	125
	Gross Anatomy	126
	Cardiac Cycle	129
	Diseases of the Heart	134
	Electrical	143
	Diseases of the Vasculature	145
	Summary	146
	References	146
	Further Reading	147
	Online Resources	147
	Glossary	148
	Multiple Choice Questions	149
Chapter 8	The Blood and Associated Disorders	151
	<i>David Yore</i>	
	Introduction	151
	Functions of Blood	152
	Composition of Blood	152
	Blood Groups	155
	White Blood Cells	156
	Haemostasis	158
	Areas of Internal Bleeding of Concern	161
	Care and Management of Internal Bleeding	163
	Anaemia	166
	Sepsis	169
	External Considerations	170
	Intracranial Bleeding	170
	Leukaemia	171
	Haemophilia	172
	Summary	173
	References	174
	Further Reading	174
	Online Resources	174
	Glossary	175
	Multiple Choice Questions	176
Chapter 9	The Renal System and Associated Disorders	178
	<i>Liam Rooney</i>	
	Introduction	178
	Kidneys	179
	Regulating Blood Pressure: the Renin–Angiotensin–Aldosterone System	182
	Ureters	183
	Urinary Bladder	184
	Urethra	185
	Disorders of the Renal System	186
	Renal Calculi	186
	Urinary Tract Infections	190
	Glomerular Disease	192
	Diabetic Nephropathy	192
	Acute Kidney Injury	193

	Chronic Kidney Disease	193
	Tumours	194
	Ageing and the Renal System	195
	Trauma	195
	Summary	195
	References	196
	Further Reading	196
	Online Resources	196
	Glossary	197
	Multiple Choice Questions	197
Chapter 10	The Respiratory System and Associated Disorders	199
	<i>Ian Macleod and Simon Sawyer</i>	
	Introduction	200
	Anatomy and Physiology	201
	Disease Processes of the Respiratory System	205
	Summary	215
	References	215
	Further Reading	216
	Online Resources	216
	Glossary	216
	Multiple Choice Questions	217
Chapter 11	The Gastrointestinal System and Associated Disorders	219
	<i>Ian Peate and Neil Coleman</i>	
	Introduction	220
	Components of the Gastrointestinal System	221
	Conditions of the Upper Gastrointestinal Tract	227
	Conditions of the Lower Gastrointestinal Tract	229
	The Acute Abdomen	231
	Accessory Organs	232
	Summary	236
	References	237
	Further Reading	237
	Online Resources	237
	Glossary	237
	Multiple Choice Questions	238
Chapter 12	The Endocrine System and Associated Disorders	240
	<i>Sadie Diamond-Fox and Alexandra Gatehouse</i>	
	Introduction	241
	Physiology of the Endocrine System	241
	Hormones	241
	Control of Hormones	245
	Introduction to Common Endocrine Pathologies	247
	Clinical Features of Endocrine Disorders	247
	Pituitary Disorders	247
	Thyroid Disorders	249
	Parathyroid Disorders	253
	Adrenal Disorders	253
	Pancreatic Disorders	256
	Summary	260
	References	260
	Further Reading	260

	Online Resources	261
	Glossary	261
	Multiple Choice Questions	261
Chapter 13	The Reproductive Systems and Associated Disorders	263
	<i>Tim Millington and Aimee Yarrington</i>	
	The Female Reproductive System	264
	Antepartum Haemorrhage	274
	The Male Reproductive System	276
	Summary	287
	References	287
	Further Reading	289
	Online Resources	289
	Glossary	289
	Multiple Choice Questions	289
Chapter 14	Pain	291
	<i>Rory Prevett</i>	
	Introduction	291
	The Physiology and Pathophysiology of Pain	292
	Nociceptor Transduction	293
	Transmission	293
	Modulation	293
	Perception	295
	Pain Theories	296
	Pathophysiology	297
	Pain Assessment	300
	Adult Assessment	300
	Paediatric Assessment	303
	The Biopsychosocial Approach	306
	Pain Management	306
	Summary	310
	References	310
	Further Reading	311
	Online Resources	311
	Glossary	311
	Multiple Choice Questions	311
Chapter 15	The Musculoskeletal System and Associated Disorders	313
	<i>George Bell-Starr and Ashley Ingram</i>	
	Introduction	313
	The Musculoskeletal System	314
	Bone Development and Structure	314
	Joints	316
	Muscle	318
	The Nervous System	319
	Common Musculoskeletal Presentations	319
	Lower Back Pain	321
	Arthritis	321
	Osteoporosis	322
	Assessing Musculoskeletal Presentations	323
	Treating Musculoskeletal Presentations	325
	Summary	328
	References	328

	Further Reading	329
	Online Resources	329
	Glossary	329
	Multiple Choice Questions	330
Chapter 16	Fluid, Electrolyte Balance and Associated Disorders	332
	<i>Noleen P. Jones</i>	
	Introduction	332
	Body Fluid Compartments	333
	Composition of Body Fluid	333
	Body Fluid Balance	334
	Osmosis	335
	Electrolytes	336
	Diffusion	337
	Hormones That Regulate Fluid and Electrolytes	337
	Oedema	339
	Pulmonary Oedema	339
	Peripheral Oedema	340
	Disorders Associated with Fluid and Electrolyte Imbalance	340
	Nausea and Vomiting	343
	Nausea	343
	Vomiting	343
	Clinical Investigations	346
	Caring for the Patient with Oedema	346
	Pulmonary Oedema	347
	Peripheral Oedema	348
	Summary	350
	References	351
	Further Reading	351
	Online Resources	352
	Glossary of Terms	352
	Multiple Choice Questions	353
Chapter 17	The Skin and Associated Disorders	355
	<i>Melanie Stephens and Derek Fox</i>	
	Introduction	356
	Anatomy and Physiology	356
	Function of the Skin	361
	Wound Healing	361
	Assessment	362
	Wound Assessment	366
	Skin Infections: Viral, Bacterial and Fungal	367
	Generalised Pustular Psoriasis	369
	Wounds	369
	Types of Wounds	370
	Factitious/Iatrogenic/Self-Harm Wounds	372
	Summary	375
	References	376
	Further Reading	377
	Online Resources	377
	Glossary	377
	Multiple Choice Questions	378

Chapter 18	The Ears and Eyes	380
	<i>Carl Clare</i>	
	Introduction	380
	The Senses of Equilibrium and Hearing	381
	The Structure of the Ear	381
	Equilibrium	384
	Hearing	384
	Disorders of the Ear	388
	Ménière's Disease	391
	The Sense of Sight	392
	Lacrimal Apparatus	394
	The Eye	394
	The Processing of Visual Information	399
	Disorders of the Eye	399
	Summary	402
	References	403
	Further Reading	403
	Online Resources	403
	Glossary	404
	Multiple Choice Questions	404
Chapter 19	Death and Dying	406
	<i>Sarah Lumley and Simon Sawyer</i>	
	Introduction	406
	The Process of Dying	407
	The Grieving Process	408
	Palliative Care	409
	Advance Decision to Refuse Treatment	409
	Assisted Dying	411
	Sudden Unexpected Death in Paediatrics	411
	Paramedic Management of Death and Dying	412
	Summary	417
	References	418
	Further Reading	419
	Online Resources	419
	Glossary	419
	Multiple Choice Questions	420
	<i>Multiple Choice Answers</i>	422
	<i>Index</i>	430